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Final Hit To CSE Mains 2024

ECONOMY & ECONOMIC DEVELOPMENT

Features

- Comprehensive and Concise Notes
- Inter-linking of Current and Static Topics
- Updated Data and Facts
- Keywords for Quality Answers
- Integrated with PYQs

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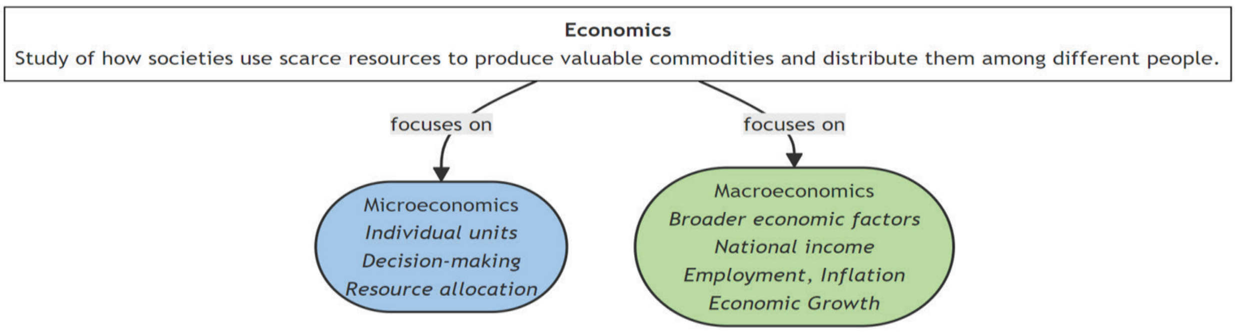
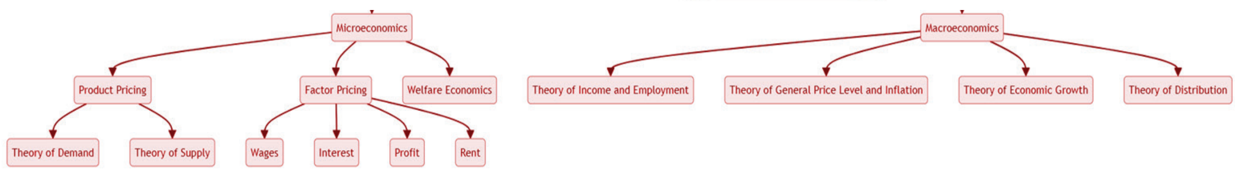
1 INDIAN ECONOMY- PAST, PRESENT & FUTURE

India's economic story is one of **determination, innovation, and vision**. **India's economic journey over the past decade** has been one of **impressive growth and transformation.** Decisive policy interventions have strengthened the nation's infrastructure and financial sectors, fostering inclusive development and job creation. **Inflation control and fiscal stability** have improved significantly, marking a shift from past vulnerabilities to a position of **strength**.

The global economic recovery faces hurdles. Supply chain disruptions persist, potentially impacting trade, costs, and inflation worldwide. Having tackled past challenges, India is confident in its ability to weather these emerging disturbances. However, **India's economic outlook is bright**, with projections **of exceeding 7% growth for FY24 and potentially FY25**, a remarkable achievement in the post-pandemic era. The future holds promise for continued economic progress.





Primitivism	Feudalism	Capitalist Economy	Socialist Economy	Mixed Economy
• In primitive agrarian societies, individuals produced necessities from building dwellings, growing crops, and hunting game at the household or tribal level.	• This was defined by the lords who held land and leased it to peasants for production, who received a promise of safety and security from the lord.	• In a capitalist system, the products manufactured are divided among people, not according to what they want but on the basis of purchasing power, which is the ability to buy products and services.	• In a socialist society, the government determines what products are to be manufactured in accordance with the requirements of the society.	• Mixed systems have characteristics of both the command and the market economic system. • For this purpose, the mixed economic systems are also known as dual economic systems.

DRIVERS OF INDIA'S GROWTH IN THE LAST DECADE

Reforms to Resolve Twin Balance Sheet Problem

- **Recapitalization and PSB Merger:** Improved stability and efficiency of public sector banks.
- **SARFAESI Act 2002 Amendment and IBC 2016:** Enhanced business environment and facilitated honorable exits for failing businesses; 2,808 corporate debtors rescued by September 2023.

Simplification of Regulatory Frameworks

- **Real Estate (Regulation and Development) Act 2016:** Promoted transparent transactions; over 1 lakh projects and 72,012 agents registered.
- **Unified GST:** Simplified tax system, reduced compliance, and formalized the economy; tax collections increased from ₹0.9 lakh crore in FY18 to ₹1.5 lakh crore in FY23.

Ease of Living & Doing Business

- **Tax Reforms:** Lowered corporate and income tax rates, exempted sovereign wealth and pension funds from taxes, and removed Dividend Distribution Tax.
- **Decriminalization of Minor Offenses:** Resolved over 1,400 cases without court involvement; eliminated 25,000 unnecessary compliances and repealed 1,400 archaic laws.

Government-Private Sector Engagement

- **New Public Sector Enterprise (PSE) Policy:** Minimized government presence in PSEs.
- **Make in India and PLI Programs:** Boosted manufacturing and exports; attracted domestic and foreign investments.
- **Strategic Sector Openings:** Enhanced private sector opportunities in defense, mining, and space.

Supporting MSMEs

- **Emergency Credit Line Guarantee Scheme:** Provided financial support.
- **MSME Definition Revision and TReDS:** Addressed delayed payments and improved financial inclusion.
- **Startup Ecosystem**: Recognized start-ups increased from 452 in 2016 to over 1,17,254 in 2023.

Logistics & Infrastructure

- **Dedicated Connectivity Programs: Bharatmala, Sagarmala, UDAN, and National Logistics Policy 2022** modernized infrastructure.
- **Capital Expenditure Increase:** Union government's effective capital expenditure rose to **4.5% of GDP in 2023-24** from 2.8% in 2014.
- **Digitalization Reforms:** Improved access to finance, markets, and tax collection; reduced transaction costs.

Inclusive Welfare Policies

- **Women and Poor Support:** Provided free gas connections to 9.11 crore women, built 11.72 crore toilets, and 2.6 crore pucca houses.
- **Ayushman Bharat Scheme**: Facilitated 6.27 crore hospital admissions.

CHALLENGES OF THE INDIAN ECONOMY

Global Integration and Technology:

- **Impact of Global Integration:** Increased fragmentation and a slowdown in **hyper-globalization** affect India's integration with the global market.
- **Threat of Artificial Intelligence (AI): Automation** due to **Artificial Intelligence (AI)** threatens job security, with nearly **40%** of global employment potentially impacted.
- **Macroeconomic Concerns:**
- **Pandemic Fallout (January 2020):** The **COVID-19 pandemic** caused a global economic contraction in **2020**, leading to loss of education and income opportunities in India. Despite the **Omicron** wave, India's economy rebounded in **FY22**, surpassing pre-pandemic levels due to extensive vaccination and localized lockdowns.
- **Russia-Ukraine Conflict (February 2022):** The conflict escalated in **2022**, leading to a rise in critical commodity prices and exacerbating inflationary pressures. Weather anomalies further worsened food price inflation.
- **Synchronized Monetary Tightening:** Measures to control inflation, like **synchronized monetary tightening** by central banks, caused capital flight to the US, leading to currency depreciation and increased inflation in net importing economies like India.
- **Slowdown in Chinese Economic Activity:** China's economic slowdown due to their **zero-COVID policy**, a contracting real estate sector, and tepid fiscal expansion impacted global trade.
- **Currency Depreciation:** Modest depreciation of the **Rupee** against the **US dollar** contributed to inflation and widened India's current account deficit, further exacerbated by high global commodity prices.
- **Slowing Economic Growth:** Despite increased global trade post-pandemic, global economic growth is projected to decelerate in **FY23** and **FY24** due to monetary tightening, geopolitical tensions, persistent inflation, and subdued demand.

NATIONAL INCOME AND INEQUALITY:

- **Low National and Per Capita Income:** India's GDP per capita has shown modest growth, tripling from **$439** in **2000** to **$1,346** in **2010**, but only reaching around **$2,000** in **2019**.
- **Income and Wealth Inequality:** Income and wealth inequality are stark, with **Oxfam International** reporting that the **top 10%** of the Indian population holds **77%** of the total national wealth.

Structural Challenges:

- **Overdependence on Agriculture:** The agriculture sector contributes around **17.5%** of GDP and employs nearly **42%** of the workforce, despite a declining GDP share.
- **Population Pressure:** India is now the world's most populous country, with a current population of 1.5 billion people and exceeding. This rapid growth puts pressure on resource and job creation.
- **Unemployment:** Slow economic growth coupled with rapid population growth has accentuated unemployment. **Underemployment** and **disguised unemployment** are also prevalent in agriculture.
- **Scarcity of Capital & Low Rate of Capital Formation:** India's low capital per capita hinders economic progress. Net savings and investments, however, have shown some improvement.
- **Underdeveloped Infrastructure:** India faces a massive infrastructure financing gap, estimated at **$1 billion** a day by the **World Bank.**
- **Low Level of Productivity:** Limited technological adoption and primitive methods contribute to overall low productivity in India.

Climate Change:

- **Vulnerability to Climate Change:** India is highly vulnerable to climate change, with a significant portion of the country prone to **droughts** and **earthquakes**.
- **Economic Impact of Climate Change:** Extreme weather events due to climate change are estimated to cost India around **$9-10 billion** annually.
- **Water Scarcity: Water scarcity** is a growing concern, with over **6 crore** Indians facing acute shortages and major cities like **Delhi** and **Bangalore** at risk of groundwater depletion by **2025**.

These challenges pose a significant threat to India's economic growth and development. However, India also has immense potential for progress through strategic policy interventions, technological advancements, and investments in infrastructure and human capital.

NAVIGATING THE GLOBAL RECESSION: INDIA'S ECONOMIC OUTLOOK IN 2024

As the global economy teeters on the brink of recession in 2024, India emerges as a beacon of relative stability. Despite facing external challenges, India's economic resilience shines through, offering a promising outlook amidst global turmoil.

Economic Slowdown: An economic slowdown refers to a general decline in the growth rate of a country's Gross Domestic Product (GDP). This phenomenon, also known as a growth recession, indicates a period where economic expansion slows but does not necessarily contract, leading to reduced economic activity and potential challenges in job creation and investment.

India's Economic Resilience

- **Strong Manufacturing Sector:** India's manufacturing sector remains a cornerstone of its economic strength. In the third quarter of 2024, the sector achieved an impressive 8.4% growth, defying global slowdown concerns and significantly contributing to the nation's economic buoyancy.
- **Resilient Export Performance:** Indian exports have shown remarkable resilience. Despite global headwinds, data suggests a marginal decline of only **1-2%** in merchandise exports in FY 2023-24 compared to the previous year. This robust performance helps maintain economic momentum.
- **Proactive Policy Measures:** The Indian government has adopted proactive measures to bolster economic resilience. The February 2024 budget, with its focus on increased infrastructure spending (**11.1% rise**), aims to stimulate growth and create opportunities.

Impact on India

A global recession poses significant challenges:

- **Trade and Export Challenges:** A global slowdown could lead to a decline in demand for Indian exports, impacting sectors like textiles and automobiles.
- **Foreign Investment Flows:** Investor caution during a recession might lead to reduced Foreign Direct Investment (FDI) inflows, potentially affecting India's growth trajectory.
- **Currency Volatility:** Global market fluctuations could trigger currency volatility, impacting import costs, inflation rates, and overall macroeconomic stability.
- **Supply Chain Disruptions:** Disruptions in global supply chains could affect Indian industries' access to raw materials and components, hindering production and raising costs.
- **Consumer Sentiment:** Economic uncertainty can lead to cautious consumer spending, impacting domestic demand, a crucial driver of Indian economic growth.

Government Response

The Indian government is taking decisive steps to mitigate these challenges:

- **Emphasis on Structural Reforms:** The government's commitment to structural reforms, such as streamlining labor laws and digitizing processes, aims to improve business ease and attract investments.
- **Investment in Infrastructure:** Continued investment in infrastructure development, as seen in the recent budget, will create jobs, boost economic activity, and mitigate the effects of a global slowdown.
- **Sectoral Support:** Targeted support for key sectors like manufacturing and agriculture can strengthen India's ability to weather global economic challenges.

India's proactive approach and inherent economic resilience position it well to navigate the potential global recession in 2024. By emphasising strategic policy interventions, robust infrastructure development, and targeted support for key sectors, India is set to emerge stronger and more resilient. Amidst global economic headwinds, India stands out as a promising growth story in the coming years.

STEPS NEEDED TO BUILD A RESILIENT ECONOMY

- **Spendings:** Increased spending on **Health, Education and Infrastructure** and cut on spending on wasteful subsidies, thus restructuring **India's Public Finance.**
- **Investments:** Increase in Capital Expenditure with emphasis on **durable assets** and Decrease in Revenue Expenditure. **National Infrastructure Pipeline** aims to invest **Rs 111 lakh crore** by **2025** in a range of projects spanning across sectors to boost the infrastructure sector.
- **Human Capital:** To become an **Alternative Global Manufacture and Economic Powerhouse**, India needs to focus upon its **Human Capital, huge internal Consumer Demand and clinical implementation of policy prescriptions.**
- **Employment Generation:** Need to reduce the existing disguised unemployment in Agriculture and shift the extra workforce towards **Manufacturing and Services** by creating opportunities for them.
- **Reforms: Second Generation Land reform** by fixing **Land Titling**, and acquisition issues.

Thus, through these measures **Economic Complexity** can be changed into **Economic prosperity.**

V-SHAPED ECONOMIC RECOVERY

A **V-shaped recovery** is characterized by a **quick and sustained recovery** of economic performance indicators after a **sharp economic decline.**

- **India's Post-Pandemic V-Shaped Recovery:** Despite a 23.9% GDP contraction in the first quarter, India experienced a reduced decline of 7.5% in the second quarter of 2020-21, highlighting a V-shaped recovery trajectory.
- **Factors Driving Recovery**
  - **Timely Lockdowns**: Stringent lockdown measures were implemented promptly to curb the spread of COVID-19.
  - **Policy Response**: The Indian government introduced initiatives like the National Infrastructure Pipeline and the **Atma Nirbhar Bharat** package to support economic recovery.
  - **Atma Nirbhar Bharat Package:**The **20 lakh crore Atma Nirbhar Bharat** package focused on building a self-reliant India across **five pillars**: Economy, Infrastructure, System, Vibrant Demography, and Demand.

Key Terms: Economic growth, policy interventions, inflation control, fiscal stability, global economic challenges, GDP growth projections, economic reforms, infrastructure development, job creation, fiscal policies, public sector banks, regulatory frameworks, digitalization, inclusive welfare policies, global integration, technological advancements, economic resilience, structural challenges, climate change, economic slowdown, global recession, proactive policy measures, resilient export performance, V-shaped recovery, Atma Nirbhar Bharat, human capital development, investment in infrastructure, employment generation, second-generation land reforms.

Previous Year Questions		
1.	Do you agree that the Indian economy has recently experienced V-shapes recovery? Give reasons in support of your answer.	2021
2.	While we flaunt India's demographic dividend, we ignore the dropping rates of employability. What are we missing while doing so? Where will the jobs that India desperately needs come from? Explain.	2014

2 GROWTH & DEVELOPMENT

ECONOMIC GROWTH VS ECONOMIC DEVELOPMENT

The judicious use of resources is central to economic progress, which can be examined through two key lenses: Economic Growth and Economic Development.

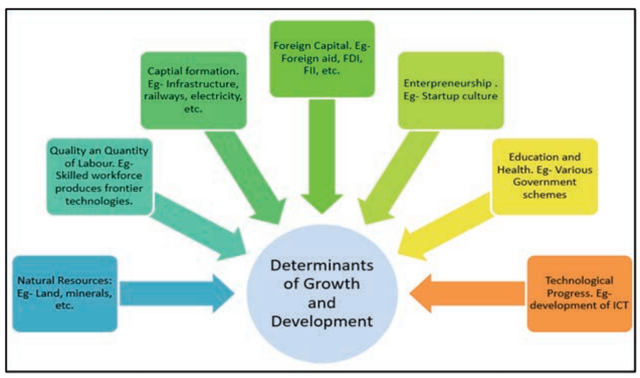
Economic Growth	Economic Development
• It is the **increase in the value of all goods and services** generated in the economy. • It denotes the percentage rise in the country's GDP or GNP each year. • It primarily emphasises GDP and total output and assesses the formal economy in extremely quantitative terms and observable outcomes.	• It is described as a **rise in a country's or region's economic riches** for the benefit of its citizens. • Both Economic Growth and Economic development together leads to better Economic Progress. • It strongly emphasises qualitative developments to produce quantitative outcomes.

DIMENSIONS OF GROWTH AND DEVELOPMENT

Development is a multifaceted process that encompasses the social, psychological, and political dimensions of a society. In other words, "development" extends beyond mere economic growth and should be understood in a broader, more holistic context.

Development has four major dimensions:

- **Economic Dimensions**: Economic Development creates the **conditions for economic growth and improved quality of life** by expanding the capacity of individuals, firms, and communities to maximise the use of their talents and skills to support innovation.
  - **For example,** it involves reducing transaction costs and responsibly producing and trading valuable goods and services.
  - **This aligns with Sustainable Development Goal 12:** Responsible Consumption and Production.
- **Social Dimensions:** Social development is about **putting people at the centre of development.** This means a commitment that development processes need to benefit people. It includes a system that is socially sustainable and can make sure that everyone gets enough and similar social services, **like schooling and health care,** and that people have the same rights and responsibilities.
  - **For example,** Civic activism, Gender equality, Interpersonal safety and trust etc.
  - **This is in line with Sustainable Development Goal 3:** Good Health and Well Being.



- **Environmental Dimension**: A system that is good for the environment must grow out of the use of natural resources or environmental investment functions that keep the resource base stable. **Agenda 21 - UNCED's blueprint for Sustainable Development** - gives high priority to the implementation of **"win-win" policies** that exploit the complementarity between poverty reduction, economic efficiency and sound environmental management.
  - **For example,** Sustainable use of wetlands
  - **This aligns with Sustainable Development Goal 11:** Sustainable Cities and Communities.
- **Human Dimensions**: The human development approach, developed by the economist **Mahbub ul Haq**, is anchored in **Amartya Sen's work on human capabilities**, often framed in terms of whether people are able to "be" and "do" desirable things in life.
  - **For example,** Freedom of Choice, well fed, sheltered, healthy.
  - **This is in line with Sustainable Development Goal 2:** Zero Hunger.

The **Human Development Report** published by the **United Nations Development Program** measures the achievements of Human Development across four indicators, namely, **Life Expectancy at Birth, Expected Years of**

Schooling, Mean Years of Schooling, and Gross National Income. As per the recent report of 2022, India slipped two ranks from 130 in 2020 to 132 in 2022 due to the COVID-19 pandemic.

LIMITATIONS OF ECONOMIC GROWTH

The process of economic expansion is not without constraints. Thus, we must not lose sight of these in the reckless pursuit of progress, since they may have major social and economic consequences for society.

- **Inequality of Income**: Economic development may **lower social wellbeing** since increased output may lead to relative scarcity of certain other resources or similar variables for future generations, making it more difficult for them to sustain the current level of welfare in the future.
- **Pollution and Other Negative Externalities:** The push for more productivity tends to put **increasing strain on the environment, resulting in increased pollution** - air, water, and noise.
- **Loss of Non-Renewable Resources**: Growth is **seldom distributed equally.** As a result, the distribution of the rewards of the growth process becomes the first significant restriction of the economic growth process.
- **Trade Deficit**: **Higher per capita income and consumption** might contribute to an increase in the trade imbalance.
- **Balanced & Unbalanced Growth:** There are two ideas on economic growth strategy:
  - **Theory of Balanced Growth**: According to Rodan, Nurkse, and Lewis, these economies **should invest in all sectors** at the same time to attain balanced growth.
  - **Unbalanced Growth Theory**: According to Hirschman, Singer, and Fleming, **these economies should create an unbalanced condition** by making huge investments in any area.

Case Study

Urban Sprawl:

- It has increasingly become a major issue in the global trend towards urbanization.
- Faced not only by developed countries but also by developing countries, and by large urban centers and medium and small cities alike.
- It raises social and environmental concerns at the same time.
- In the case of India, with the increasing population, the pressures on land and resources are also increasing.
- Urban sprawl is therefore seen as one of the potential threats to sustainable development where urban planning with effective resource utilization and allocation of infrastructure initiatives are key concerns.

Example: Case of Vijayawada city Sprawl spreading across the river Krishna appears to be leaf frog sprawl patron. Expansion of the city is more rapid in the east zone of poranki, peddapulipaka, chowdavaram and penamaluru while it is less in the Western zone of Vijayawada. It is present just near to the new capital of Andhra Pradesh Amaravati so it causes rapid growth of the city in coming years.

MEASUREMENT AND INDICATORS OF ECONOMIC GROWTH AND DEVELOPMENT

- **Gross Domestic Product (GDP)**: It is the **market value** of all the **final goods and services** produced within a **domestic territory** in a financial year by a **normal resident**.
  - **Simon Kuznets**, an economist at the National Bureau of Economic Research, initially **proposed the concept of GDP** in a report to the United States Congress in response to the Great Depression.
- **Gross Domestic Product and Gross Value Added (GVA)**: According to the RBI, the **GVA of a sector is defined as the value of output minus the value of its intermediary inputs. This "value added"** is shared among the primary factors of production, labour and capital. GVA calculates the national income from the supply **side**.

GDP = GVA + (Net Taxes Earned by the Government) — (Net Subsidies provided by the Government)

The Difference Between GDP and GVA:

GDP	GVA
• The entire number of goods produced in a nation is its GDP.	• GVA stands for the value added to the product to improve its many features.
• GDP provides information from a consumer or demand standpoint.	• GVA provides a snapshot of the state of economic activity from the supply-side or producer perspective.

• GDP Comprises Four Components: Government Investment, Government Spending, Net Foreign Trade, and Personal Consumption (the difference between exports and imports).	• GVA = Gross Investment + Government Investment + Private Consumption + Government Spending + (Exports-Imports)

Significance of GDP
- **Important Metric:** GDP is widely acknowledged as the foremost metric employed by economists worldwide to gauge the growth of an economy.
- **Performance Indicator:** It serves as a pivotal criterion for evaluating the performance of an economy and significantly influences its development trajectory.
- **Investment Indicator:** Investors globally rely on GDP and its growth rate as a pivotal indicator while making investment decisions.
- **Policy Making:** Governments and central banks utilize GDP data extensively in formulating policies that shape economic strategies and interventions.

Limitations of GDP
- **Inclusivity:** GDP fails to incorporate non-market transactions, rendering it incapable of discerning the sustainability of a country's growth trajectory.
- **Environmental Factors:** It overlooks the potential impacts on human health and the environment resulting from the creation or utilization of output, which may manifest as externalities.
- **Wealth Distribution:** While GDP provides insights into overall economic activity, it neglects to capture the distribution of wealth or income within the economy.
- **Other Aspects:** GDP is unable to gauge normative facets such as social justice, happiness, and political freedom.

GDP CALCULATION IN INDIA
- The government switched to a **new base year of 2011-12** for national accounts in **January 2015,** replacing the previous base year of 2004-05.
- The then Central Statistics Office (CSO) **(now National Statistical Office)** discontinued GDP at factor cost and embraced the worldwide practice of **GDP at market price** and the **Gross Value Addition (GVA)** measure.
- The new database is also much more comprehensive, covering financial institutions as well as regulatory bodies like **SEBI, PFRDA, and IRDA.**
- The newer system uses data from **MCA 21 (MCA 21 is a Ministry of Corporate Affairs e-governance** initiative that was launched in 2006 and allows firms/companies to electronically file their financial results).

ALTERNATIVES TO GDP CALCULATION:
- **Various Indices:** Metrics such as the human poverty index, infant mortality rate, maternal mortality rate, happiness index, etc., offer alternative measures of economic development.
- **Economic Development:**
  - Unlike economic growth, economic development assesses both the quantity and quality of changes within the economy.
  - It encompasses factors beyond mere output expansion, including social well-being, environmental sustainability, and human capital development.
- **Green GDP:**
  - **Definition:**
    - Green GDP, also known as **Environmentally Adjusted Domestic Product,** accounts for environmental degradation in GDP calculations.
    - It **factors in net natural capital consumption,** which includes environmental degradation, resource depletion, and conservation efforts, in national income computations.
    - Its objective is to ascertain a more sustainable measure of GDP.
  - **Challenges:**
    - **Speculative Assumptions:** Calculations may rely on speculative or hypothetical assumptions, introducing uncertainty into the results.
    - **Non-Traditional Markets:** Difficulty arises when valuing environmental assets that lack a traditional market and are thus non-tradable.
    - **Transboundary Resources:** Challenges emerge in accounting for natural resources that extend beyond national boundaries, such as those in high seas.

    - **Resistance:** Some regions have shown resistance to Green GDP, particularly when its calculation yields figures lower than conventional GDP, as seen in China's discontinuation of Green GDP focus in 2004 due to opposition from local and regional governments.
- **Human Capital Index:**
  - **Definition:** The Human Capital Index aims to provide insights into the complexity of education, employment, and the workforce to facilitate informed decision-making.
    - It serves as a tool for individuals to better understand and navigate education and career choices.

India's Green GDP
• In October 2022, a RBI's Bulletin published first of its kind estimates about India's Green GDP. • Green GDP adjusts the conventionally calculated GDP for the environmental costs of economic growth. Thus, it is less than GDP if economic growth is not eco-friendly. • The Bulletin suggested that India's trajectory of green GDP has displayed an upward movement with visible improvements, particularly since 2012. • India's green GDP ratio has mostly seen an upward trend, indicating a greater emphasis on maintaining a healthier balance between the country's growth aspirations and environmental protection.

INCLUSIVE GROWTH

- Inclusive growth is economic growth that creates opportunity for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms, fairly across society - OECD.
- 11th Five Year Plan (2007-12) laid special emphasis on Inclusive Growth for the first time. It was later carried forward by the 12th Five Year Plan.

Key Data and Facts

• According to the Multidimensional Poverty Index 2022, released by UNDP, India has the largest number of poor people worldwide at 22.8 crore.
• According to the World Inequality Report 2022, released by World Inequality Lab India was among the most unequal countries in the world.
• In 2018, India ranked 62 amongst the 74 emerging economies, in the Inclusive Development Index released by World Economic Forum (WEF).
• The Global Gender Gap Report published by the World Economic Forum measures the Gender gap between men and women across the four indicators, namely, Political Empowerment, Educational Attainment, Economic Participation and Opportunity, and Health and Survival.
• In 2023, the **global gender gap score is 68.4%,** reflecting a slight improvement of 0.3% compared to the previous year.
• At the current pace, achieving full gender parity would require 131 years, indicating a significant deceleration in the rate of progress.
• **India's Progress:**
  ○ India has shown notable advancement, moving up **from 135th to 127th place** out of 146 countries in the 2023 edition of the report, signaling an enhancement in its ranking.
  ○ **Comparison with Neighbors:** India's neighboring countries' rankings include Pakistan at 142, Bangladesh at 59, China at 107, Nepal at 116, Sri Lanka at 115, and Bhutan at 103.
  ○ **Improvement:**
• India has witnessed **a rise of 1.4 percentage points and eight positions** since the previous edition, representing a partial recovery towards its 2020 gender parity level.
• India had bridged **64.3% of the overall gender gap,** demonstrating progress in narrowing gender disparities.

ELEMENTS OF INCLUSIVE GROWTH

- **Employment Generation:** Stable jobs signify political, economic, and social progress.
- **Poverty Alleviation:** Inclusive growth lifts vulnerable individuals out of poverty, integrating them into society.
- **Skill Development:** Enhancing skills broadens educational and career opportunities, promoting inclusivity.
- **Agriculture and Industrial Development:** Agriculture employs many but contributes little to GDP, perpetuating poverty.
- **Good Governance:** Effective governance (participation, rule of law, transparency, accountability) fosters inclusive growth.

- **Access to Essential Services:** Inclusive growth requires access to healthcare, education, defense, and sanitation.
- **Economic Growth:** Aiming for a $5 trillion economy by 2024-25 can reduce inequality, increase social spending, and create jobs.
- **Social Development:** Empowering marginalized groups (SC/ST/OBC/Minorities, women, transgenders) promotes social inclusivity.
- **Financial Inclusion:** Financial inclusion fosters savings, driving a positive economic cycle.
- **Energy Security:** Uninterrupted, affordable energy is essential for sustained economic growth.
- **Access to Justice for All:** Providing affordable access to formal and informal justice systems is crucial for addressing grievances.

NEED FOR INCLUSIVE GROWTH IN INDIA

- **Industrial Development:** Addressing slow industrial growth is crucial.
- **Mass Poverty and Low Per Capita Income:** India faces widespread poverty and low income levels, requiring intervention.
- **High and Broad-based Population:** India, now the most populous country, faces challenges in managing its diverse population.
- **Literacy:** Literacy rates, particularly among females, remain low at 74.04% (2011 census).
- **Infrastructural Issues:** Inadequate infrastructure hinders economic progress and risks a middle-income trap.
- **Poverty Reduction:** Despite progress, India still has the largest number of poor globally, needing inclusive growth.
- **Group Equality:** Inclusivity must extend to SCs, STs, OBCs, minorities, women, and differently-abled individuals.
- **Regional Balance:** Equitable growth across all states and regions is essential.
- **Agricultural Backwardness:** Despite employing over 50% of the workforce, agriculture's GDP contribution is low.
- **Unemployment:** Tackling high unemployment rates, exacerbated by COVID-19, is critical.
- **Poor Nutrition Levels:** Addressing chronic under-nutrition is crucial, as reflected by India's low Global Hunger Index ranking.

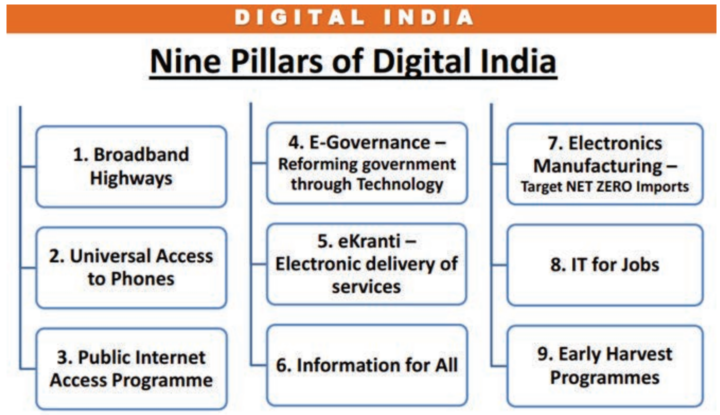
Measure Taken to Ensure Inclusive Growth:

- **Land Reforms:**
  - India implemented various land reforms post-independence to address inequalities in land ownership.
  - Measures included abolishing prevailing land tenure systems like mahalwari, zamindari, and ryotwari, along with tenancy reforms and ceiling laws for land redistribution.
- **Planning:** Inclusive Growth was a central focus of planning, with themes like "more inclusive and rapid growth" in the 11th Five Year Plan and "Faster, More Inclusive, and Sustainable Growth" in the 12th Five Year Plan.
- **Legislative Measures:**
  - The 86th Amendment in 2002 made free and compulsory education for children aged 6-14 a Fundamental Right.
  - The **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) 2005** provides a Right to work for rural residents.
  - The National Food Security Act ensures food and nutritional security by providing access to subsidized food grains.
- **Self Help Groups (SHGs):**
  - SHGs, consisting of 10 to 25 members, address common concerns and play vital roles in financial inclusion, poverty alleviation, and women empowerment.
  - The government aims to have 10 crore SHG members by 2024.
  - An agreement between the Ministry of Rural Development and Panchayati Raj and the Meesho e-commerce platform aims to market products produced by SHGs under the **Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM).**

Schemes to Ensure Inclusive Growth:

- **Pradhan Mantri Awas Yojana-Gramin:** It was launched to provide **pucca houses** to the houseless living in dilapidated houses in rural areas by **2022.**

- **Prime Minister's Employment Generation Programme (PMEGP)**: It is for generation of employment opportunities through **establishment of micro enterprises** in rural as well as urban areas.



- **Ayushman Bharat Mission: World's largest government funded healthcare program targeting more than 50 crore beneficiaries.** It aims to bring inclusivity in the field of healthcare services, by reducing out of pocket hospitalisation expenses, fulfilling unmet needs and improving access of identified families to quality inpatient care and day care surgeries.
- **Mudra Yojna:** It was launched in 2015 for providing loans up to Rs. 10 lakh to the non-corporate, non-farm small/micro-enterprises.
- **PM Jan Dhan Yojna (PMJDY):** It was introduced for **Financial Inclusion** to ensure access to financial services, namely, basic savings & deposit accounts, remittance, credit, insurance, pension in an affordable manner.
- **Digital India: Digital India** was launched in **2015** is the flagship initiative of the **Ministry of Electronics and Information Technology** and aims to digitally empower the citizens of India.
- **According** to the Prime Minister, **Digital Technologies and Direct Benefit Transfer have saved 2.23 lakh crores** from the middlemen in India.
- **Budget:** Inclusive Development has always been an agenda of the budget in India. For e.g. In the 2023 budget, inclusive development is one of the components of **SAPTARISHI.**

CHALLENGES IN ACHIEVING INCLUSIVE GROWTH:

- **Economic Challenges:**
  - **Poor Industrial Base:** Manufacturing sector lags behind the 25% GDP target, trailing China and Asian 'Tiger economies'.
  - **Resource Constraints:** Northern plains states lack strong mineral resources, limiting industrial growth.
  - **Agricultural Backwardness:** Low productivity, market volatility, and poor infrastructure create a labor-GDP imbalance.
- **Social Challenges:**
  - **Social Divisions:** Caste, class, and religious divisions hinder social capital and foster parochial loyalties.
  - **Gender Disparity:** Low female labor force participation and nutritional deficiencies, influenced by patriarchal norms, impact economic performance.
  - **Urban-Rural Divide:** Faster poverty reduction and better healthcare access in urban areas widen the rural-urban gap.
- **Administrative Challenges:**
  - **Corruption:** Ranked 85th by Transparency International on the Corruption Perception Index 2022.
  - **Bureaucratic Hurdles:** Ranked 63rd in World Bank's Ease of Doing Business; enforcement of contracts needs improvement.
  - **Social Welfare Expenditure:** Health and education spending remains below targets due to budget constraints.
- **Environmental Concerns:** Degradation affects vulnerable groups, worsened by land alienation for large projects.
- **Regional Disparities:** Persistent disparities in literacy and development, with Kerala leading and Bihar lagging.

Way Forward:

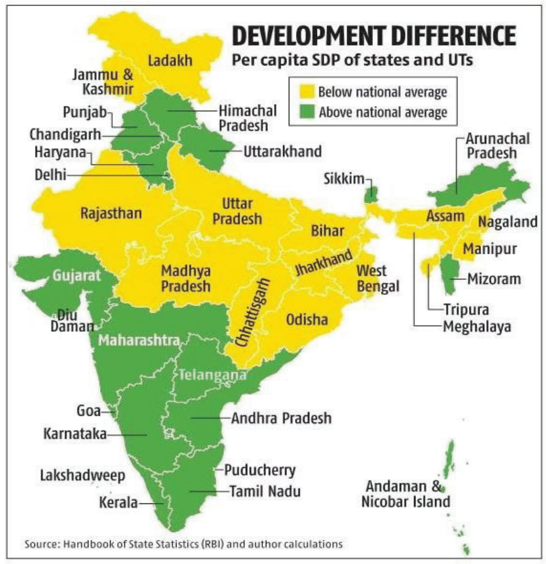
- **Ensure last-mile-delivery of Welfare Schemes** such as PM Awas Yojana, PM KISAN, PM Jan Arogya Yojana.
- **Earnest implementation of National Education Policy** directives such as vocational training, vernacular learning, accessible school complex etc.
- **Boost social welfare expenditure** by tapping into resources of Disinvestment proceeds and encouraging Civil Society and Corporate sector involvement.
- **Encourage innovation and research** by creating a conducive environment for start-up ecosystems and word-class research facilities to promote disruptive solutions.
- **World Economic Forum's three suggestions to boost social inclusion as well as economic growth:**
  1. **Countries should increase public and private investment in their citizens' capabilities**, which is the most important way they can durably lift their rate of productivity growth.

2. **Governments, together with employers' and workers' organisations, should upgrade national rules and institutions relating to work.**
3. **Countries should increase public and private investment in labour-intensive economic sectors that generate wider benefits for society**.

Conclusion

Inclusive and sustainable growth is essential for a diverse and large country like India to achieve the goal of 'Atma Nirbhar Bharat' (self-reliant India). Such growth will empower vulnerable and marginalised populations, enhance livelihoods, and promote skill-building, particularly for women. This approach ensures that economic progress is shared equitably across all sections of society, fostering social stability and long-term prosperity.

INDIA'S REGIONAL INCOME DISPARITIES



The **income disparities among India's states** over the past three decades have **increased significantly.**

- **Geographical Divide of SDP:** A clear geographical distinction exists between states with **per capita State Domestic Product (SDP)** above **the national average in 2019-20** and those below it.
  - The **affluent states are situated in the south, west, and northwest,** while the **less prosperous ones are in the north, center, and east (refer to the map).**
  - During **1990-91, the per capita State Domestic Product (SDP) of the higher-income states was 1.7 times that of the lower-income states** which **increased to 2.5 times by 2019-20.**
  - **Prominent Distinction of SDP in the Manufacturing and Services Sector:** In manufacturing, the higher- to lower-income **states' per capita SDP ratio increased from 2.4 in 1990-91 to 3.6 in 2019-20.**
  - Similarly, **the services sector rose** from **2.0 to 2.9** over the same period**.**

State Domestic Product: The State Domestic Product is defined as the aggregate of the economic value of all goods and services produced within the State's geographical boundaries, counted without duplication during a specified period, usually a year.

Reasons Behind Regional Disparities in India:

- **Historical Factors:** British development focused on regions with high manufacturing and trading potential (e.g., Maharashtra, Kolkata, Mumbai, Chennai).
- **Planning Mechanism Failure:** Higher plan outlays for Punjab, Haryana, Gujarat, Maharashtra, and Madhya Pradesh; less for backward states.
- **Concentration of Services Sector:** IT growth concentrated in higher-income states, minimal presence in lower-growth states.
- **Declining Public Investments:** Post-1991, public investment dropped, increasing private sector share, leading to uneven entrepreneurial capacity.
- **Poor Investment in Education**: Health spending rose from 4.5% to 6.6%, while education spending slightly decreased from 9.8% to 9.7%.

These factors collectively contribute to the significant regional disparities observed across India.

Way Forward:

- **Connecting Value Chains:**
  - Promote entrepreneurship and labor skills in lower-income states.
  - Link industries in high-income states with lower-cost input supply or assembly operations in northern and eastern states.
  - Encourage medium and small enterprise expansion in lower-income states.
- **Skill Development:**
  - Enhance skill development and engineering education.
  - Attract enterprises from high-income states with declining working-age population shares.
- **Region-Specific Interventions:**
  - Implement targeted policies, not a one-size-fits-all approach.
  - Focus on agro-processing, storage, transportation, and accessible employment opportunities.

  - Invest significantly in education and health.
- **Relaxing Borrowing Limits for Poor States:**
  - Provide long-term fiscal stimulus for poorer states.
  - Allow more liberal borrowing limits for poor state governments to increase capex spending and growth.

ENVIRONMENT AND DEVELOPMENT LINKAGE

Industrialisation and Urbanisation are considered sine qua non for economic development and egalitarian growth. At the same time, they also led to Pollution, Deforestation and Habitat Destruction, Climate Change, Species Extinction, Health hazards, Disruption of Traditional Livelihood, Dead Zones in Oceans, Chronic Water Scarcity.

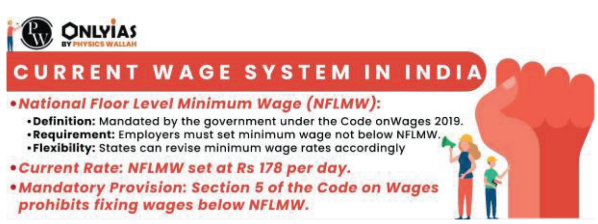
DEVELOPMENTAL FACTORS AFFECTING ENVIRONMENTAL SUSTAINABILITY:

- **Poor Compliance with Environmental Laws:** Inadequate adherence to environmental regulations such as Environmental Impact Assessment (EIA) rules and Coastal Regulatory Zone guidelines undermines sustainability efforts.
- **Unsound Subsidy Policies:** Ill-conceived subsidies, particularly on electricity and water consumption, foster excessive use and wastage, exacerbating environmental degradation.
- **Neglect of Negative Externalities:** Development projects often overlook the hidden costs of environmental damage, as the true cost of resource depletion is not borne by any single entity.
- **Population Growth Pressures:** Rapid population expansion strains the ability of low-income and lower-middle-income countries to meet the escalating per capita public expenditure required for poverty eradication, food security, healthcare, and education, as outlined by the UN.
- **Weak Institutional Framework:** Inadequate governance structures and institutional setups contribute to unplanned urbanization, resulting in urban flooding and the loss of critical ecosystems like wetlands.
- **Environmental Kuznets Curve:** The Environmental Kuznets curve theory posits that environmental degradation initially rises with income growth before stabilizing or declining. This phenomenon is attributed to advancements in financial and technological capacities, which enhance the ability to restore environmental quality.

Way Forward:

- **Enhanced Legal Safeguards:** Strengthening and effective implementation of legal frameworks like Environmental Impact Assessment guidelines through consensus-building processes.
- **Adoption of Smart Regulations:** Implementation of intelligent regulations utilizing technology and market mechanisms, such as the Perform Achieve and Trade scheme by the Bureau of Energy Efficiency.
- **Institutional Strengthening:** Reinforcement of institutions like the Ministry of Environment, Forest & Climate Change, National Green Tribunal, and National Board for Wildlife to bolster environmental governance.
- **Integration of Fiscal Instruments:** Incorporation of fiscal tools like Carbon Tax to internalize negative externalities associated with environmental degradation.
- **Promotion of Green Economy:** Actively pursuing green economy initiatives and sustainable growth models to reconcile environmental preservation with developmental imperatives.
- **Global Collaboration:** Coordination of international efforts to address global challenges like climate change and deforestation through collaborative measures.

MINIMUM WAGE V/S LIVING WAGE SYSTEM



India is set to **replace its minimum wage system** with a **living wage system by 2025.** The government is seeking technical assistance from the International Labour Organisation (ILO) to develop a **framework for estimating and implementing the living wage**.

The move follows the ILO's recent endorsement of the concept of a living wage. The endorsement came after an **agreement was reached** during a **Meeting of Experts on wage policies** which was subsequently endorsed by the ILO's governing body.

What is Living Wage?

- According to the ILO, the living wage is defined as the **level of remuneration "necessary to afford a decent standard of living for workers and their families**, taking into account the **country's circumstances** and **calculated for the work performed during the normal hours of work".** This decent standard of living includes

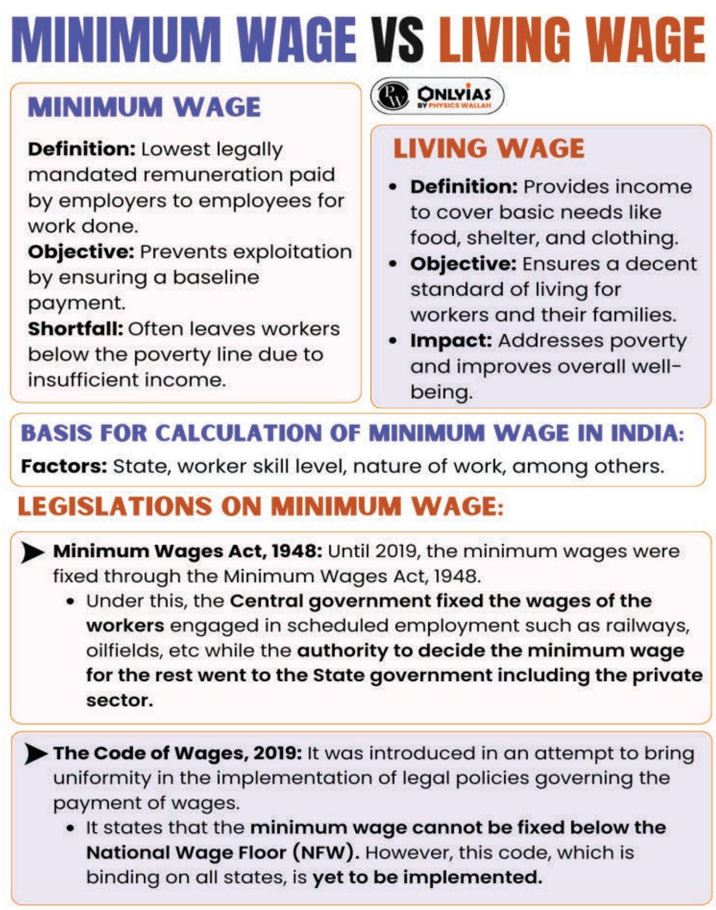
being able to afford food, water, housing, education, healthcare, transportation, clothing and other basic needs including a provision for contingencies.

Need for Living Wages/Significance:

- **Insufficiency to Meet Basic needs:** Addressing worker concerns about the current minimum wage, which is seen as insufficient to meet basic needs, especially with inflation.
    - According to the data, **45% of salaried workers earn less than Rs 9750 on monthly basis** which is **not appropriate for a worker to support himself and his family.**
    - They often **fall below the poverty line after getting minimum wages. Alleviating Poverty:** The shift from minimum wages to living wages is aimed at accelerating efforts to **lift millions out of poverty and ensure their well-being.**

> **Fair Wage:** It comes after minimum wage which **surpasses the minimum threshold** yet **falls below what's required for a living standard.**
> While the **minimum wage sets the baseline**, the **upper boundary of a fair wage is determined by the industry's financial capability to compensate.**

- **Wage Discrepancies:** There are over 500 million workers in India and **90% of them are in the unorganised sector** where many draw a daily minimum wage of `176 or more, depending on the state where they work.
    - However, this **national wage floor — not revised since 2017** — is **not binding on states** and hence a **few states pay even less than that.**
    - Surveys have shown that **almost 80 per cent of the workers in the unorganized sector earn less than 208 rupees a day**, or **less than half the government-stipulated rural minimum wage of 49 rupees a day and urban wage of 67 rupees.**
- **Achieving SDGs:** India is committed to achieving the Sustainable Development Goals (SDGs) by 2030, including the **goal of promoting decent work and economic growth.**
    - It is believed that replacing minimum wages with living wages could fast-track India's efforts to pull millions of its people out of poverty while ensuring their wellbeing.
- **Reducing Inequalities:** Since the early 2000s, India's inequality has increased significantly, with the **top 1% owning 22.6% of the country's income.**
    - Therefore, in order to **address this inequality, India needs to redesign its wage structure.**
    - India's **strong economic growth, with a rate of 8.4 per cent**, indicates the **country's capacity to support higher wages.**
- **Positive Work Culture:** Higher wages can **boost employee morale**, leading to **increased productivity, reduced turnover rates, and improved customer satisfaction.**
    - By investing in the well-being of their employees, businesses can create a **positive work environment that fosters loyalty and a strong work ethic.**



> **Provision for Living Wage under the Indian Constitution:**
> - According to **Article 43**, the State shall **endeavour to secure, by suitable legislation or economic organisation to all workers**, agricultural, industrial or otherwise, work, a living wage.

CHALLENGES IN IMPLEMENTATION OF LIVING WAGE

- **Diversity in Living Costs:** The cost of living varies significantly between cities, states, and even districts, making it **challenging to establish a uniform living wage rate.** According to a **Cost of Living City ranking of 2022**, **Mumbai emerged as the most expensive Indian city** with a rank of 127 followed by New Delhi (155).
- **Unorganised Sector:** Of the nearly 500 million strong workforce, most of them are employed with the unorganised sector which **falls outside the purview of scrutiny.**
- **Fiscal Implications:** For the government, the **fiscal implications could weigh heavily on the size of public debt.**
  - **Private-sector employers**, on the other hand, would be **reluctant to pay higher than necessary wages in fear of lower profits.**
  - Imposing a living wage means c**reating a wage floor,** which would hurt the e**conomy by impacting businesses, especially those that cannot pay hiked salaries.**
- **Lack of Awareness:** There is a lack of awareness amongst the workers about minimum wage provisions and their **entitlement under the labour laws.**
  - This is particularly true in **remote areas** and in areas where **workers are not unionized or organized.** As a result, their **wages have failed to keep pace with rising costs** and continue to **diminish in real value over time.**
- **Potential Impact of Automation and the Gig Economy on Wages:** The rise of automation and the gig economy presents unique challenges for maintaining fair compensation for workers.
  - As technology advances, certain jobs may become obsolete or undergo significant transformations.

Way Forward:

- **Government Legislation and Policies for Living Wage**
  - **Minimum Wage Laws:** Establish baseline pay standards, but comprehensive policies must address living costs.
  - **Multidimensional Poverty Indicators:** ILO should include health, education, and standard of living to define living wages, considering economic, social, and demographic factors.
- **Inflation Adjusted Wage:** Regularly adjust minimum wages to match inflation.
- **Support for Small Businesses:** Aid small enterprises in managing increased labor costs due to living wage implementation.
- **Case Studies:**
  - **United Kingdom:** Organizations adopting living wages report higher employee satisfaction, lower turnover, and increased productivity.
  - **United States:** Seattle’s $15 minimum wage improved conditions for low-wage workers, promoting equity.

Conclusion

India's aim to replace the minimum wage with a living wage by 2025 represents a significant **step towards improving the lives of Indian workers.** The government's commitment to developing a well-defined and operational system, with technical assistance from the ILO, is crucial for the successful implementation of this policy. **Balancing affordability for businesses** with ensuring worker well-being will be key to achieving this goal.

Key Terms: Growth Vs Development, Capital Formation, Balanced and Unbalanced Growth, Negative Externalities, Green GDP, Stunted Industrial Development, Access to Justice for All, Regional Development, Land Reforms, Environmental Kuznets Curve.

	Previous Year Questions	
	Growth and Development	
1.	Explain the difference between computing methodology of India's Gross Domestic Product (GDP) before the year 2015 and after the year 2015.	2021
2.	Define potential GDP and explain its determinants. What are the factors that have been inhibiting India from realising its potential GDP?	2020

3.	Do you agree with the view that steady GDP growth and low inflation have left the Indian economy in good shape? Give reasons in support of your arguments.	2019
4.	"Industrial growth rate has lagged behind in the overall growth of Gross-Domestic-Product (GDP) in the post-reform period" Give reasons. How far are the recent changes in Industrial Policy capable of increasing the industrial growth rate?	2017
5.	Among several factors for India's potential growth, the savings rate is the most effective one. Do you agree? What are the other factors available for growth potential?	2017
6.	The nature of economic growth in India is described as jobless growth. Do you agree with this view? Give arguments in favour of your answer.	2015
	Inclusive Growth	
7.	Explain intragenerational and intergenerational issues of equity from the perspective of inclusive growth and sustainable development.	2020
8.	What are the salient features of 'inclusive growth'? Has India been experiencing such a growth process? Analyze and suggest measures for inclusive growth.	2017
9.	Comment on the challenges for inclusive growth which include careless and useless manpower in the Indian context. Suggest measures to be taken for facing these challenges.	2016
10.	Pradhan Mantri Jan-Dhan Yojana (PMJDY) is necessary for bringing unbanked to the institutional finance fold. Do you agree with this for financial inclusion of the poorer section of the Indian society? Give arguments to justify your opinion.	2016
11.	Capitalism has guided the world economy to unprecedented prosperity. However, it often encourages short-sightedness and contributes to wide disparities between the rich and the poor. In this light, would it be correct to believe and adopt capitalism driving inclusive growth in India? Discuss.	2014

3 ECONOMIC PLANNING

WHAT IS ECONOMIC PLANNING?

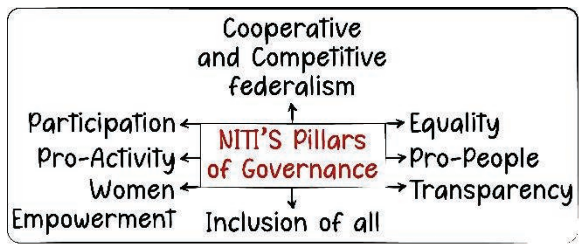
Economic planning involves the **strategic allocation of resources** in a systematic manner to attain **predetermined objectives**, ensuring optimal utilization of available resources. The underlying philosophy of planning is that the welfare of citizens cannot be solely guaranteed by markets and price systems. In addition to these mechanisms, there are economic necessities such as investing in infrastructure and public goods like transportation, which benefit the entire society. The significance of economic planning lies in its ability to guide and structure a country's economic development, ensuring sustainable growth and addressing socio-economic challenges.

PLANNING COMMISSION

- The Planning Commission, while no longer active, played a crucial role in policymaking and governance in India.
- Established through a **Government of India Resolution in March 1950**, its primary objectives were to elevate the living standards of Indians by effectively utilizing the country's resources, increasing production, and creating employment opportunities for all in the service of society.
- Pandit Nehru served as the first Chairman of the Planning Commission.

NITI AAYOG

- In line with its reform agenda, the Government of India replaced the Planning Commission with **National Institution for Transforming India (NITI)** Aayog to better align with the nation's needs and aspirations.
- This move signifies a shift towards **cooperative federalism**, encouraging states to collaborate in the national interest.
- Formed on **January 1, 2015**, through a Union Cabinet resolution, NITI Aayog serves as the premier **policy think tank**, providing strategic inputs for the government's long-term policies and programs. In line with its reform agenda, the Government of India replaced the Planning Commission with **National Institution for Transforming India (NITI)** Aayog to better align with the nation's needs and aspirations.



Key Functions of NITI Aayog

- **Shared Vision:** Develop national development priorities and strategies with active State involvement.
- **Federalism:** Promote cooperative and competitive federalism through continuous structured support with States.
- **Planning:** Create mechanisms for village-level planning, aggregating to higher government levels.
- **Economic Strategy:** Ensure national security interests are included in economic policies.
- **Marginalised Society:** Focus on at-risk sections of society to ensure they benefit from economic progress.
- **Monitoring and Evaluation:** Monitor and evaluate programs, identifying necessary resources to enhance success.
- **Capacity Building:** Focus on technology upgrades and capacity building for program implementation.

VISION, STRATEGY AND ACTION

- The 15-year vision document includes a **seven-year strategy** for 2017-24 as the **National Development Agenda**.
- Additionally, a **three-year Action Agenda** from 2017-18 to 2019-20 is being formulated, divided into seven parts with specific action points to boost economic growth.
- The conclusion of the 12th five-year plan on March 31, 2017, marked the initiation of the **three-year action plan** from April 1, discontinuing the previous approach of waiting for state governments to implement schemes.
- NITI Aayog is also entrusted with crafting a **15-year Vision Document and a seven-year strategy** guiding government development initiatives until 2030.

ROAD TO 5 TRILLION $ ECONOMY

- The government's plan to elevate India to a **$5 trillion economy** involves emphasizing macro-level growth while concurrently ensuring comprehensive welfare measures at the micro level.
- It centers around promoting a digital economy, embracing fintech, fostering technology-driven development, steering the transition to sustainable energy, championing climate action, and leveraging a virtuous cycle of investment and growth. This strategic roadmap was initiated in 2014.

- Achieving a $5 trillion economy presents both opportunities and challenges for a country.

OPPORTUNITIES

- **Demographic Dividend:** India is one of the **youngest countries in the world,** with 27.3% of its population aged 15–29 years, **(Report of Technical Group on Population Projections for India and States 2011-2036, Ministry of Health & Family Welfare).**
- **Digital Transformation:** The rapid adoption of digital technologies can boost efficiency, innovation, and financial inclusion.
- **Entrepreneurship and Start-ups:** A thriving entrepreneurial ecosystem can drive innovation, generate employment, and contribute to economic growth.
- **Global Trade:** Leveraging international markets for exports and investments can be a key driver of economic expansion.
- **Infrastructure Development:** Investments in infrastructure, such as transportation and energy, can enhance overall productivity and competitiveness.

Criticisms of NITI Aayog

- **Limited Financial Autonomy:** Unlike the Planning Commission, NITI Aayog does not allocate funds and only has an advisory role, limiting its influence on state and central budgets.
- **Coordination Challenges:** Works with various central ministries and state governments, leading to coordination issues due to differing priorities, especially evident in agriculture reforms.
- **Implementation Gap:** There is often a discrepancy between recommended policies and their execution. The Aspirational Districts Programme has seen varied success due to different levels of administrative efficiency across states.
- **Political Influence:** As a government body, its initiatives can be influenced by political agendas, potentially affecting the neutrality and effectiveness of its policies, especially during election cycles.
- **Data Reliability:** Relies heavily on external data, which may have issues with timeliness, accuracy, and consistency. Discrepancies in employment and poverty data have led to debates over policy outcomes.
- **Resource Constraints:** Faces constraints in manpower and expertise, affecting its ability to cover all mandated areas effectively, leading to delays and less focused outcomes in some sectors.

Way Forward:

- **Dedicated Time Period:** Decentralization of planning should be done, but within a five-year plan framework.
- **Administrative Lacunae:** Bureaucratic inertia needs to be shaken, specializing it and fixing the accountability on the basis of performance.
- **Should be an Opinion-Based Body**: NITI Aayog should act as a force for persuasion, not control centre. Its role should be to promote local systems solutions to national problems.
- **Diversification and Women Inclusion**: All stakeholders including women must be involved in the implementation of a plan in a large, diversified and democratic country. Thus, planning should be devolved to State governments, and even to the third tier of city and district governance.
- **Transformational Approach Needed**: It requires new methods to speed up ‘organisational learning’ amongst stakeholders in the system who must make plans together and implement them together. Thus, it is not good enough to have a plan, there must also be a strategy for its cooperative implementation.

Conclusion

India's economic compass spins toward inclusive, sustainable growth, guided by strategic reforms like **GST and Make in India.** Recent capex surge fuels a business-friendly engine, propelling India toward a $5 trillion goal. Resilience, innovation, and widespread well-being blossom on this multi-pronged roadmap, as India transforms into a dynamic economic powerhouse, balancing macro aspirations with micro realities.

Key Terms: Economic Planning, Resources, Infrastructure, Public Goods, Planning Commission, Governance, Five-Year Plans, Development, Production, Employment, Agriculture, Poverty, Literacy, Healthcare, Infrastructure, Technology, Monitoring, Digital Economy, Fintech, Sustainability, Climate, Demographics, Entrepreneurship, Trade

Previous Year Questions		
1.	How are the principles followed by the NITI Aayog different from those followed by the erstwhile Planning Commission in India?	2018
2.	How globalisation has globalization led to the reduction of employment in the formal sector of the Indian economy? Is increased informalisation detrimental to the development of the country?	2016
3.	Examine the impact of liberalization on companies owned by Indians. Are they competing with the MNCs satisfactorily?	2013

4 GOVERNMENT BUDGETING

INTRODUCTION

A budget can be defined as the most basic and comprehensive financial report in which **revenues from all the sources and outlays for all activities are consolidated**. In simple terms, the budget is an **annual financial statement of the revenue and expenditure** of a government.

Budget procedure refers to the formal process through which a government **plans, develops, approves, executes, and monitors** its budget. This process typically involves **several stages, each serving a specific purpose** in managing public finances. Some common steps include:

NEED OF GOVERNMENT BUDGETING

- **Political Need:** Control over Public Purse as it is also constitutionally required, Financial Accountability of the government to the Parliament and Administrative Management.
- **Socio-Economic Need:** Such as declaration of economic policies, encouraging and impacting economic growth, allocation of resources, tax related concessions and other provisions, production of goods and facilitation of services **(e.g., the Kisan rail for marketing agricultural products)** when necessary, targeting inflation and fiscal deficit to ensure economic stability and finally redistribution of resources for managing regional inequalities.
- **Taxing Demerit Goods** with high rates and **promotion of employment** is done through government budgeting.

COMPONENTS OF THE BUDGET

BUDGET CLASSIFICATION

Article 112 of the Indian Constitution makes a requirement in India to **present before the Parliament** a statement of **estimated receipts and expenditures** of the government in respect of **every financial year** which runs from **1 April to 31 March.**

REVENUE VERSUS CAPITAL BUDGET

Revenue and Capital budgets are two distinct components of a government's overall budget framework, each serving different purposes and managing different types of expenditure.

Here's a breakdown of their key differences:

Feature	Revenue Budget	Capital Budget
Focus	Day-to-day expenses and receipts	Long-term investments and asset creation
Income	Taxes, fees, fines, etc.	Borrowing, surplus, specific levies
Expenditure	Salaries, administration, subsidies, social programs	Infrastructure, capital projects
Objective	Fiscal stability	Economic growth
Impact	Short-term economic activity	Long-term economic development

The Five-Step Framework for Gender Budgeting includes

Zero Based Budget: It is a method of budgeting in which all expenses are evaluated each time a Budget is made and expenses must be justified for each new period. It starts from the zero base and every function of the government is analysed for its needs and cost. Budget is then made based on the needs.

Outcome Budget: It is a kind of result-oriented budgeting. It was first introduced in 2005 and analyses the progress of each ministry and department and what the respected ministry has done with its Budget outlay. It measures the development outcomes of all government programs.

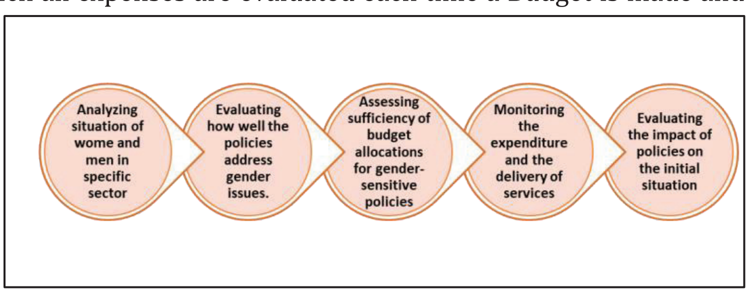


Fig: Process of Gender Budgeting

GOVERNMENT ACCOUNTS

Government accounts typically refer to the **financial records and transactions of government entities**. These accounts are crucial for Budgeting, Revenue and expenditure management, Accounting Standards, Auditing, balancing public debt, overall treasury Management, and ensuring Transparency and Accountability.

The constitution of India mandates the Union Government to maintain three kinds of accounts to manage the revenue and expenditure.

GOVERNMENT DEFICITS

A government deficit occurs when a government's expenditures exceed its revenues in a given period. In other words, it's the difference between what the government spends and what it collects in taxes and other sources. This deficit leads to government borrowing to cover the gap between spending and revenue. Various types of government deficits are:

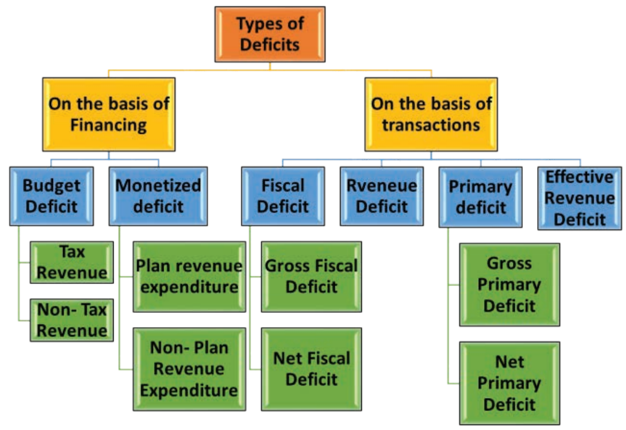


Fig: Types of Deficit

Each of these are discussed below in detail :

1. **Revenue Deficits**
    - A revenue deficit occurs when a government's total revenue is insufficient to cover its current expenditure, excluding capital expenditures.
    - In simpler terms, it indicates that the government is not generating enough income to meet its day-to-day operational expenses, such as salaries, subsidies, and interest payments, without borrowing.

Revenue Deficit = Total Revenue Expenditure – Total Revenue Receipts

A. **Components of Revenue Deficit:**
   a. **Revenue Receipts**: These include income from taxes, non-tax revenue and grants from other governments or international organizations.
   b. **Revenue Expenditure**: This consists of the government's operational expenses, such as salaries, pensions, subsidies, interest payments, and other routine expenditures.

B. **Implications of Revenue Deficit:**
   a. A revenue deficit implies that the government is relying on borrowed funds to meet its day-to-day expenses, as opposed to using borrowed money for capital investments or development projects.
   b. It indicates a potential imbalance in the government's fiscal management, as a sustained revenue deficit may lead to a rising debt burden.

C. **Borrowing to Cover Revenue Deficit:**
   a. To cover a revenue deficit, a government may borrow through the issuance of bonds or other debt instruments. This borrowing adds to the overall public debt.
   b. While **borrowing for capital expenditures** may contribute to **economic development**, **borrowing to cover operational expenses** raises concerns about **fiscal sustainability.**

D. **Fiscal Discipline:**
   a. Governments may need to focus on **increasing revenue** through tax reforms, **improving tax collection efficiency**, and **controlling unnecessary expenditures** and **rationalizing subsidies** and **welfaristic programmes.**

E. **Long-Term Impacts:**
   a. Persistent revenue deficits can have long-term consequences on a country's economic health. It may lead to a **higher debt-to-GDP ratio**, **increased interest payments**, and **potentially crowd out funding** for essential development projects.

F. **Policy Measures:**
   a. These measures could include **increasing tax revenue**, **reducing non-essential expenditures**, **improving the efficiency of public spending**, and **promoting economic growth** to enhance overall revenue.

2. Fiscal Deficit:

- The fiscal deficit is a key indicator of a government's financial health and represents the difference between its total expenditures and total revenues, excluding money from borrowings.

- It's a measure of how much the government needs to borrow to meet its expenditures when its total spending exceeds the revenue it generates.

Fiscal Deficit = Total Expenditure – Total Revenue (excluding borrowings)

A. **Key Components of the Fiscal Deficit:**
   a. **Total Expenditure**: This includes **all government spending**, both on a **revenue account** (day-to-day expenses like salaries, subsidies, and interest payments) and **capital account** (long-term investments and expenditures).
   b. **Total Revenue (excluding borrowings)**: This includes tax revenue, non-tax revenue, and grants. **Borrowings are excluded to focus on the underlying fiscal position.**

B. **Implications of Fiscal Deficit:**
   a. A **persistently high fiscal deficit** may lead to concerns about the government's **ability to service its debt** and may result in **higher interest rates**.
   b. It implies that the government **needs to borrow to meet its spending** requirements.

C. **Fiscal Discipline:**
   a. A fiscal deficit can be a deliberate policy choice during economic downturns to stimulate growth through increased government spending.
   b. Fiscal discipline involves managing the fiscal deficit to maintain a balance between growth stimulation and debt sustainability.

D. **Relation to Government Debt:**
   a. The fiscal deficit contributes to the accumulation of government debt. When a government runs a fiscal deficit, it typically borrows to cover the gap between spending and revenue.

E. **Macroeconomic Implications:**
   a. The fiscal deficit has broader implications for the economy, influencing factors such as interest rates, inflation, and overall economic stability.

Governments closely monitor their fiscal deficit as part of their fiscal policy management, aiming to strike a balance between promoting economic growth and maintaining fiscal sustainability. It's an important metric for assessing a government's fiscal responsibility and its impact on the overall economy.

3. Primary Deficit

The primary deficit is a key fiscal metric that measures the **difference between** a government's **total expenditures (excluding interest payments on existing debt**) and its **total revenue**.

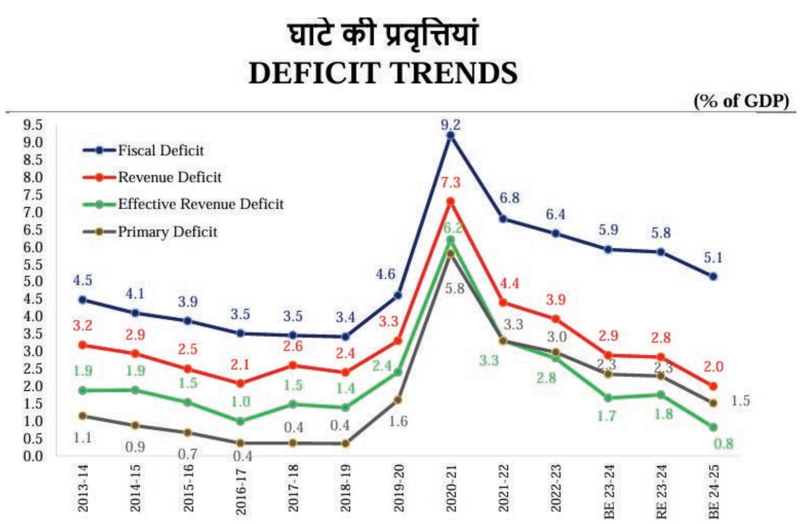
Essentially, the primary deficit provides insight into the **government's fiscal position, excluding the impact of interest payments.**

Primary Deficit = Fiscal Deficit – Net Interest Payments on Debt

A. **Components of the Primary Deficit:**
   a. **Fiscal Deficit**: This is the difference between a government's total expenditures and total revenue, including interest payments on existing debt.
   b. **Interest Payments on Debt:** This component represents the amount the government **spends on servicing its existing debt.**

B. **Implications of the Primary Deficit:** It helps assess whether the government is **borrowing to cover ongoing operational expenses or to service existing debt.** This may raise concerns about the sustainability of fiscal policy.

C. **Debt Management:** A government with a primary deficit may find it **challenging to**



reduce its overall debt burden because it is borrowing not only to cover interest payments but also to fund its operational activities.

D. **Relation to Fiscal Responsibility:** Managing and reducing the primary deficit is often a goal for governments aiming to demonstrate fiscal responsibility. **Controlling the primary deficit can contribute to a sustainable fiscal policy.**

While some level of borrowing may be necessary for productive investment and economic growth, an excessively high primary deficit may signal fiscal challenges and potential risks to long-term economic stability.

4. Effective Revenue Deficit

Effective revenue deficit excludes certain revenue expenditures that are considered productive or developmental in nature. The idea is to distinguish between regular revenue expenditures and those that contribute to capital formation or asset creation.

Effective Revenue Deficit = Revenue Deficit – Net Grants for Capital Creation

In India,

Effective Revenue Deficit = Revenue Deficit – Grants given to states for Capital Creation

A. **Key components of Effective Revenue Deficit**
   a. **Revenue Deficit:** It reflects the shortfall when current revenue receipts are **not sufficient to cover current revenue expenditures.**
   b. **Grants for Capital Creation:** This component includes grants for **capital expenditure** or asset creation.

B. **Significance of Effective Revenue Deficit:** It provides a **more refined measure of the revenue deficit** by excluding certain expenditures that are considered developmental in nature.

C. **Focus on Capital Formation:** By excluding grants for capital creation, the effective revenue deficit aims to focus on revenue expenditures that do not contribute to capital formation, thereby providing a **clearer picture of the government's commitment to fiscal discipline.**

D. **Developmental Expenditures:** It acknowledges that **some revenue expenditures contribute to long-term development**, such as investments in **infrastructure, education, and healthcare**. These expenditures are **excluded** from the deficit to **encourage developmental activities.**

E. **Policy Implications:** Governments may use it to assess the **impact of their revenue expenditures on capital formation** and to align fiscal policy with developmental goals.

It's important to note that the concept of effective revenue deficit is **not universally adopted**. Policymakers consider it **alongside other fiscal indicators** to gain a **comprehensive understanding of a government's fiscal position** and its commitment to both **short-term** stability and **long-term development.**

5. Effective Capital Expenditure

"Effective capital expenditure" is not a standardized or widely recognized term in economic or financial literature. In India, The Central Government provides various grants to States and Union Territories, classified as revenue expenditure at the central level. However, certain grants result in the creation of assets owned by the State government, not the Central government. While categorized as revenue expenditure for the Central Government, these grants essentially contribute to the development of assets for the respective State governments.

Effective Capital Expenditure = Capital Expenditure + Grants given to states for creation of capital assets

GENERAL ANALYSIS OF BUDGETARY DEFICITS

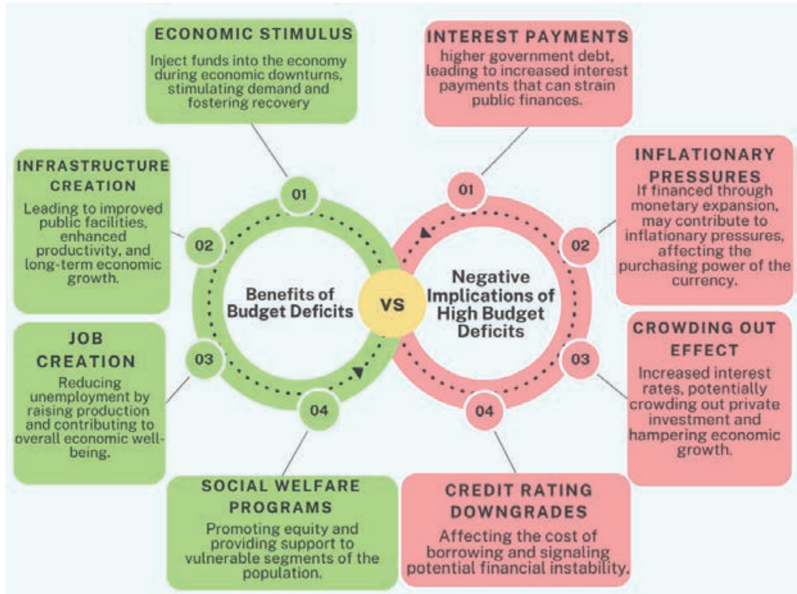
Monetization of Deficit and Deficit Financing

Monetization of deficit and deficit financing play a crucial role in shaping the fiscal policies of governments worldwide. These practices are often employed to address economic challenges, stimulate growth, or manage budget shortfalls.

- **Deficit Financing:** Deficit financing occurs when a government spends more money than it collects in revenue, resulting in a budget deficit. Governments resort to deficit financing for various reasons, such as funding public infrastructure projects, addressing economic recessions, or responding to emergencies. The deficit is typically financed through borrowing, either domestically or internationally, issuing bonds, or printing money.
- **Monetization of Deficit:** Monetization of deficit refers to the process of financing a budget deficit by directly creating new money. In this scenario, central banks, often in collaboration with the treasury, may purchase government securities or debt instruments directly from the government. The funds for these purchases are typically created through the central bank's ability to issue currency.

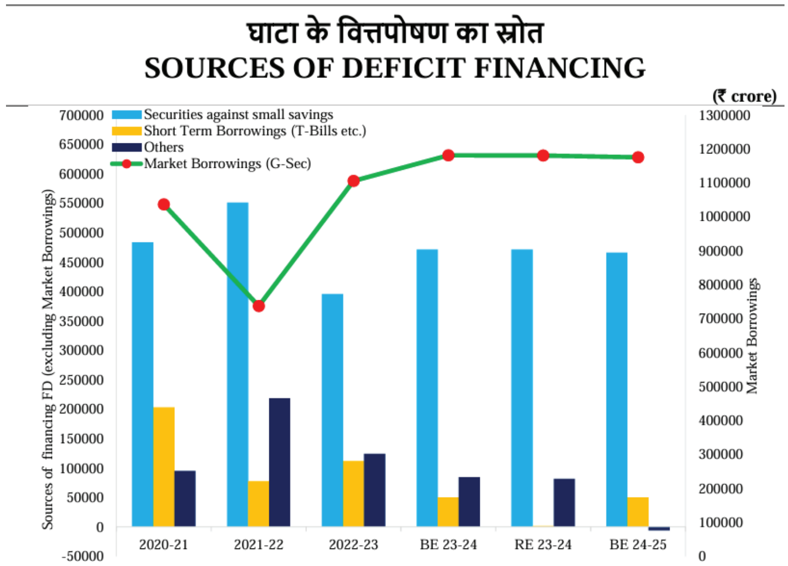
Deficit Financing:

- **Reasons for Deficit Financing:**
  - **Economic Stimulus:** During economic downturns, governments may increase spending to stimulate economic activity and employment.
  - **Infrastructure Development**: Funding major infrastructure projects that contribute to long-term economic growth.
  - **Emergency Response**: Addressing unforeseen events such as natural disasters, pandemics, or geopolitical crises.
- **Methods of Financing Deficit:**
  - **Borrowing**: Governments issue bonds or borrow funds domestically and internationally to cover budget shortfalls.
  - **Issuing Securities**: Governments sell financial instruments like treasury bills and bonds to investors to raise capital.
  - **Printing Money**: In extreme cases, governments may resort to printing more money, although this can lead to inflationary pressures.



Monetization of Deficit:

- **Mechanisms of Monetization:**
  - **Open Market Operations:**
    - Central banks conduct open market operations by buying government securities in the secondary market, injecting money into the economy.
    - This process influences short-term interest rates and is a common tool for implementing monetary policy.
  - **Direct Lending to the Government:**
    - Central banks may directly purchase government bonds from the primary market, providing the government with immediate funds.
    - While it eases short-term fiscal pressures, it raises concerns about the independence of central banks and potential long-term economic consequences.



FISCAL RESPONSIBILITY AND BUDGET MANAGEMENT (FRBM) ACT, 2003

The Fiscal Responsibility and Budget Management (FRBM) Act of 2003 is an important piece of legislation in India aimed at **institutionalizing fiscal discipline and prudence in the management of the country's finances**. The Act was enacted by the Government of India with the objective of promoting long-term macroeconomic stability and reducing fiscal deficits to sustainable levels.

OBJECTIVES OF FRBM ACT, 2003

- **Reduce fiscal deficits** by limiting government spending and revenue gap.
- **Control government debt** by bringing it to a sustainable level.

Documents mandated by FRBM to be put along the budget in Parliament

- **Medium-term Fiscal Policy Statement:** This document outlines the **three-year rolling target**s for specific fiscal indicators. It includes the government's s**trategic priorities and the fiscal policies** it plans to use to achieve these targets.

- **Fiscal Policy Strategy Statement:** This statement explains the strategic priorities of the government for the fiscal year. It includes the **policies and rationale for any major deviation in fiscal measures** or fiscal indicators and the likely impact of such policies on fiscal sustainability.
- **Macroeconomic Framework Statement**: This statement provides an **assessment of the growth prospects of the economy**, with a detailed analysis supporting the budget estimates. It includes key **macroeconomic forecasts** and the underlying assumptions.
- **Statement of Revenue Foregone:** Although not explicitly mentioned in the original FRBM Act, this statement became a regular feature of budget documents. It details the revenue impact of tax concessions and incentives.
- **FRBM Act (Amendment), 2012**: Introduced the concept of **"Effective Revenue Deficit"** and mandated a statement on this as well. Effective Revenue Deficit excludes those revenue expenditures in the form of grants for the creation of capital assets.

These documents are designed to provide a comprehensive view of the government's fiscal strategy, policy rationale, and the expected impact on the economy. They play a crucial role in ensuring accountability and transparency in fiscal governance.

- **Promote macroeconomic stability** by avoiding excessive government borrowing and inflation.
- **Ensure intergenerational equity** by distributing fiscal benefits and burdens fairly across generations.
- **Enhance transparency and accountability** by providing detailed information on fiscal performance and liabilities.
- **Medium-term fiscal policy planning** by presenting a statement of fiscal policies for the next three to five years

RECENT AMENDMENTS TO THE ACT:

- In the Medium Term Fiscal Policy Statements for 2021-22 and 2022-23, rolling targets for budget deficits were not presented.
- The 2022 Budget proposes reducing the fiscal deficit to under 4.5% of GDP by the fiscal year 2025-26.
- The projected fiscal deficit for 2022-23 is 6.4% of GDP, reflecting the government's borrowing to finance its expenditures.
- The anticipated revenue deficit for 2022-23 stands at 3.8% of GDP, indicating the government's need to borrow for expenses that are unlikely to yield future returns.
- Revised estimates suggest a slight increase in the fiscal deficit to 6.9%, exceeding the budget estimate, while the revenue deficit is expected to reduce to 4.7%.
- The target for the primary deficit (the fiscal deficit excluding interest payments) is set at 2.8% of GDP for 2022-23.
- Interest payments as a percentage of revenue receipts have risen from 36% in 2011-12 to 42% in 2020-21.

Fig: Public Debt Management

GOVERNMENT BORROWINGS

COMPONENTS OF GOVERNMENT'S DEBT AND LIABILITIES

- **Market Borrowings:**
  - This is the most significant portion of the government debt.
  - Includes government securities (G-Secs) such as treasury bills and dated securities issued through auctions.
- **Loans from Banks and Financial Institutions:**
  - Loans taken from domestic banks and financial institutions.
  - Often used for specific projects or bridging short-term funding gaps.
- **External Debt:**
  - Borrowings from foreign governments, international financial institutions, and through sovereign bonds issued to foreign investors.
  - Includes loans from the World Bank, Asian Development Bank, and bilateral credits.
- **Small Savings and Provident Funds:**
  - Funds accumulated through various small saving schemes like the Public Provident Fund (PPF), National Savings Certificate (NSC), and other saving instruments.
  - These savings are often used by the government for its expenditure needs.

- **State Development Loans (SDLs):**
  - Loans taken by state governments, but the central government may also bear a portion of this debt.
  - Issued through securities to fund various state-level projects.
- **Securities Against Small Savings:** Debt instruments issued against small savings collections.
- **Treasury Bills:**
  - Short-term debt instruments issued by the government to meet immediate financial needs.
  - Generally, they have a maturity period of less than one year.
- **Special Securities Issued to RBI:** Special bonds or securities issued to the Reserve Bank of India under specific circumstances.
- **Other Liabilities**: Includes various other forms of borrowings like oil bonds, fertiliser bonds, etc., which are typically issued for specific purposes.

Factors Contributing to Increased Public Debt in India:

- **Bank Recapitalization Efforts:** The infusion of capital into state-owned banks via recapitalization bonds in 2017-18 significantly raised the central government's debt both in absolute terms and as a percentage of GDP.
- **Issuance of UDAY Bonds:** State liabilities escalated in 2015-16 and 2016-17 due to the issuance of Ujwal Discom Assurance Yojna (UDAY) bonds.
- **Low Tax-to-GDP Ratio:** Despite a fourfold increase in national income since independence, India's gross tax-to-GDP ratio stands at around 9.2% as of 2021. The majority of tax revenue is derived from indirect taxes.
- **Flaws in the Tax System:** The Indian tax system is plagued with inefficiencies, leading to high levels of tax evasion.
- **Inefficient Use of Public Funds:** Significant amounts of public funds are expended inefficiently in government departments, often marred by corruption, bribery, and bureaucratic red tape, leading to reduced productivity and wastage of resources.

These factors collectively contribute to the growing public debt in India, highlighting the need for fiscal reforms and efficient public finance management.

CONCLUSION

India's fiscal policy walks a tightrope between fueling aspirations and maintaining prudence. While recent reforms show progress, striking the right balance between growth-oriented investments and manageable deficits remains critical. Continuous adaptation and policy refinement are crucial for India to walk this fiscal tightrope with confidence and unlock its full potential.

Key Terms: Annual Financial Statement, Financial Accountability, Crowding Out Effect, Inflationary Pressures, Debt Trap, Resource optimization, Fiscal Consolidation, Zero Based budget, Outcome Budget, Gender Budgeting, Sabka Sabka Vishwas

Previous Year Questions		
1.	Distinguish between Capital Budget and Revenue Budget. Explain the components of both these Budgets.	2021
2.	The public expenditure management is a challenge to the Government of India in the context of budget making during the post liberalization period. Clarify it.	2019
3.	Comment on the important changes introduced in respect of the Long Term Capital Gains Tax (LTCGT) and Dividend Distribution Tax (DDT) in the Union Budget for 2018-2019.	2018
4.	One of the intended objectives of Union-Budget 2017-18 is to ‘transform, energize and clean India’. Analyze the measures proposed in the Budget 2017-18 to achieve the objective.	2017
5.	Women empowerment in India needs gender budgeting. What are the requirements and status of gender budgeting in the Indian context?	2016
6.	What were the reasons for the introduction of Fiscal Responsibility and Budget Management (FRBM) Act, 2003? Discuss critically its salient features and their effectiveness.	2013

5 TAXATION

INTRODUCTION

Taxes can be defined as a **"compulsory contribution from a person to the government to the expenses incurred in the common interest of all, without reference to special benefits conferred".** It is levied and extracted by the government through **legislation.** If taxpayers fail to pay the taxes or evade taxes, it is **punishable by law.** The tax system in India is mainly a **three-tier system** which is divided between the **Central, State Governments and the Local Government** (such as Municipality and Panchayats).

CLASSIFICATION OF TAXES BASED ON INCIDENCE

- **Direct Tax:** Direct taxes are those in which the **incidence and impact of tax** falls on the **same person/point.** E.g. **Income tax, Corporation tax.**
- **Indirect Tax:** Indirect taxes are those in which the **incidence and impact of tax** falls on **different persons/points.** E.g. **GST, Service tax** etc.

Features of a Good Taxation system		
Fairness	**Adequacy**	**Simplicity**
This is achieved through principles of vertical and horizontal equity. **Vertical equity** means that those with greater ability to pay, usually measured by income or wealth, should pay more. **Horizontal equity** refers to the principle that individuals with similar income or circumstances pay similar amounts of tax.	The tax system should generate enough revenue to fund public services and meet the government's budgetary requirements without resorting to excessive public debt.	Complexity can lead to higher compliance costs for taxpayers and administrative costs for the government, as well as increased opportunities for tax evasion and avoidance.
Transparency and Visibility	**Administrative Efficiency**	**Neutrality and Economic Growth**
Taxpayers should be able to understand how tax rates are set, how tax revenues are used, and how the tax system operates. This transparency helps in building public confidence in the tax system.	The costs of administering the tax system should be kept as low as possible without compromising its effectiveness and integrity. This involves an efficient tax collection process and mechanisms to reduce evasion and fraud.	A good tax system should not unduly influence economic decisions. It should aim to minimize its impact on market transactions and economic behavior to avoid distorting economic activities and growth.
Flexibility and Responsiveness	**Predictability and Stability**	**Protection of Taxpayers' Rights**
The tax system should be capable of adapting to changing economic circumstances and policy needs. This allows the government to respond effectively to economic crises or shifts in public policy priorities.	Taxpayers should have certainty about the tax rules, including rates and bases, so they can plan their finances effectively. Frequent changes to tax laws can create uncertainty and instability.	A good tax system respects taxpayers' rights, including the right to privacy, the right to be informed, and the right to appeal and be heard.

RECENT TRENDS IN TAX COLLECTION

- The tax collection has been **buoyant** for both indirect and direct taxes.
- Gross Direct Tax collections for Financial Year (FY) 2023-24 register a growth of 18.74%.
- The provisional figures of Direct Tax collections for the Financial Year 2023-24 (as of 17.03.2024) show that Net collections are at Rs. 18,90,259 crore, compared to Rs. 15,76,776 crore in the corresponding period of the preceding Financial Year (i.e. FY 2022-23), representing an increase of 19.88%.
- The Net Direct Tax collection of Rs. 18,90,259 crore (as of 17.03.2024) includes Corporation Tax (CIT) at Rs. 9,14,469 crore (net of refund) and Personal Income Tax (PIT), including Securities Transaction Tax (STT) at Rs. 9,72,224 crore (net of refund).
- **Corporate and Personal income tax** constitutes **half of Gross Tax Revenue.**

DIRECT TAXATION

Direct tax is one that the tax payer pays directly to the government. Examples includes Income tax and Corporation Tax.

MERITS OF DIRECT TAXATION

- **Economic and Social balance:** The Government of India has launched well-balanced tax slabs depending on an individual's earnings and age. The tax slabs are also determined based on the economic situation of the country. Exemptions are also put in place so that all income inequalities are balanced out.
- **Productivity:** As there is a growth in the number of people who work and community, the returns from direct taxes also increases. Therefore, direct taxes are considered to be very productive.
- **Inflation is curbed:** Tax is increased by the government during inflation. The increase in taxes reduces the necessity for goods and services, which leads to inflation to compress.
- **Certainty:** Due to the presence of direct taxes, there is a sense of certainty from the government and the taxpayer. The amount that must be paid and the amount that must be collected is known by the taxpayer and the government, respectively.
- **Distribution of wealth is equal:** Higher taxes are charged by the government to the individuals or organisations that can afford them. This extra money is used to help the poor and lower societies in India.

ISSUES IN DIRECT TAXES

- **Tax Evasion and Avoidance**: Individuals and businesses exploit loopholes and engage in illegal means to evade taxes.
- **Scope of Rationalization and Simplification**: The tax rate structure has remained largely unchanged for 20 years. There is a need to rationalize exemptions and reconsider savings incentives like PPF.
- **Corporate Tax Rate Structure**: The effective corporate tax rate varies significantly across sectors, lacking vertical equity. India's corporate tax rate is higher than the OECD median, encouraging transfer pricing.
- **Outdated Income Tax Act**: Certain provisions are superfluous, outdated, or inconsistent.
- **Balance between Direct and Indirect Taxes:** The share of direct taxes has dropped from 60% (2010-11) to 51.5% (2022-23). The increasing reliance on regressive indirect taxes disproportionately affects the poor.
- **Cross Border Transactions**: Taxation based on physical presence has led to litigation, base erosion, and profit shifting.
- **Narrow Tax Base**: Only about 1% of the population (15 million people) pays income tax. Widening the tax base could mitigate revenue loss from lower rates and a simplified structure.

GOVERNMENT INITIATIVES TO IMPROVE DIRECT TAXATION

- **Monetary Threshold Raised for Appeals before ITAT:** The monetary threshold has been raised for filing of cases from **Rs. 20 lakhs to Rs. 50 lakhs** for appeal before **Income Tax Appellate Tribunal (ITAT),** from **Rs. 50 lakhs to Rs. 1 crore** for appeal before the High Court and from **Rs. 1 crore to Rs. 2 crores** for appeal before the Supreme Court.
- **Extension of TDS/TCS Coverage:** In order to broaden the tax coverage, additional transactions were included under the purview of Tax Deduction at Source (TDS) and Tax Collection at Source (TCS).
- **Reduced Tax Rate:** The Finance Act of 2020 introduced the opportunity for individuals and cooperatives to pay income tax at concessional rates, provided they do not avail specific exemptions and incentives.
- **Encouraging Digital Transactions and Formalization**: In order to facilitate the digitalisation of the economy and reduce unaccounted transactions. Push towards digitalization and formalization will increase the expansion of the tax net.
- **Increasing Tax Compliance**: The CBDT launched **E-Sahyog** portal to facilitate online filing of the returns. In extension of Indian Customs **Single Window Interface for Facilitating Trade (SWIFT)**.

- **General Anti-Avoidance Rules (GAAR)**: Effective from April 1st, 2017, is a set of rules which helps the revenue authorities to decide whether a particular transaction has commercial substance or not and tax liability associated with a genuine transaction.
- **Place of Effective Management (POEM)**: The guidelines were introduced for the determination of residency of foreign companies, applicable from **FY 2017-18**. If **PoEM** of a firm is in India, then its worldwide income would be taxed here.
- **Information Sharing Agreement**: India has also entered into an information sharing agreement with the USA under Foreign Account Tax Compliance Act (FATCA) of USA.
- **Operation Clean Money and Project Insight**: They were launched to use data analytics to improve tax compliance and effectively utilize information in tax administration.

DIFFERENCE BETWEEN GAFA TAX AND EQUALISATION LEVY IN INDIA

Point of difference	GAFA Tax (Global Tax on Digital Giants)	Equalisation Levy
Definition	GAFA Tax refers to taxes specifically designed to target major digital corporations like Google, Apple, Facebook, and Amazon (hence GAFA).	The Equalisation Levy is a tax imposed on non-resident e-commerce operators for digital services provided in a country.
Purpose/Objective	Aims to ensure that tech giants pay a fair share of taxes in the countries where they have significant user bases but may not have a physical presence.	Intended to equalize the tax situation between foreign and domestic e-commerce companies and capture tax on digital transactions.
Primary Focus	Primarily focused on large technology companies with significant digital revenues.	Targets a broader range of digital services and e-commerce transactions.
Geographical Origin	Initiated by individual countries like France, aiming to tax profits made in their jurisdictions by large multinational tech companies.	Originating in India, it is designed to tax digital transactions involving foreign e-commerce companies.
Tax Base	Based on the revenues generated from digital services in a specific country.	Levied on the gross revenue from digital services provided by non-resident companies.
Rate of Taxation	Varies depending on the country implementing it. For example, France proposed a 3% tax rate.	In India, the rate is 2% (as of my last update) on the revenues of select digital services.
Implementation	Implemented by individual countries according to their tax laws and regulations.	Implemented as part of the broader tax code of the country, like India's Finance Act.
Global Acceptance	The concept has faced opposition from some countries and tech companies, leading to discussions for a broader global solution under the OECD.	Mainly a country-specific measure, it has not been widely adopted or discussed in global tax reform debates like the OECD's initiatives.

RATE OF GROWTH OF TAXES (%) VS GROWTH IN NOMINAL GDP				
	Nominal GDP	**Corporate Tax Growth**	**Growth in Income Tax**	**Tax Buoyancy**
2021-22	**19.5**	**55.6**	**43**	**2.52**
2022-23	**15.4**	**16**	**20**	**1.1**
2023-24 (Apr-Aug)	**8**	**15**	**35.7**	**-**

India's tax-to-GDP ratio is projected to hit 11.7% in 2024-25, showcasing a steady increase from 11.6% in the preceding year and 11.2% in 2022-23.

The Vivad Se Vishwas Scheme (VSV Scheme)

It is an initiative aimed at resolving pending and disputed direct tax cases quickly and effectively. This scheme provides an opportunity for taxpayers to settle their outstanding taxes with certain concessions.

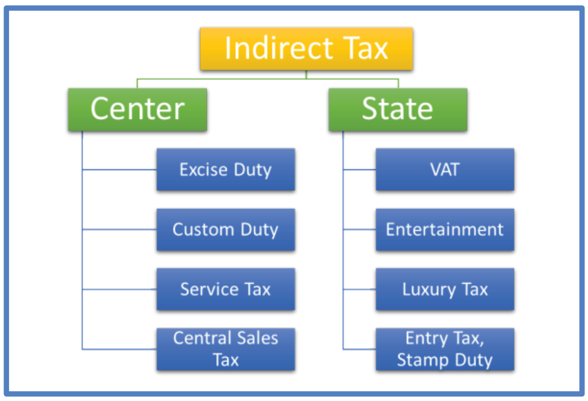
Key aspects of the VSV Scheme include:

1. **Target Audience:** The scheme is beneficial for individuals and entities with tax disputes in various forums, including the Supreme Court, High Courts, Income Tax Appellate Tribunals, and Commissioner of Appeals.
2. **Resolution of Disputes:** It aims to resolve a substantial number of pending tax disputes, approximately 483,000 cases, related to direct taxes.
3. **Concessions on Penalties and Interest:** The scheme offers a waiver of interest and penalty for those who clear their pending taxes by March 31st.
4. **Extended Deadline with Additional Charge:** For taxpayers unable to pay by March 31st, there is an option to pay by June 30th, but with an additional 10% on the tax amount.
5. **Provision for Disputed Interest and Penalty:** If the dispute involves interest and penalty, taxpayers are required to pay only 25% of the disputed amount by March 31st, which increases to 30% if extended to June 30th.

This scheme is designed to ease the burden of prolonged tax litigation for taxpayers and help the government clear the backlog of unresolved tax dispute

INDIRECT TAXATION

Indirect tax is a tax that can be passed on to another person or group example entertainment tax, gst.



MERITS OF INDIRECT TAXATION

- **Wider Coverage:** Indirect taxes are levied on goods and services, ensuring a broader tax base. For example, GST is applied on most goods and services, capturing revenue from a large number of transactions.
- **Convenient Collection:** Indirect taxes are collected at the point of sale, making it easier for the government to collect revenue without directly involving the taxpayer. For instance, excise duty is collected from manufacturers, simplifying the process for consumers.
- **Encourages Savings and Investments:** By taxing consumption rather than income, indirect taxes can promote savings and investments. For example, VAT encourages people to save more as it is only levied on purchases.
- **Less Evasion:** Indirect taxes are harder to evade compared to direct taxes since they are included in the price of goods and services. For example, customs duty on imported goods is collected at the port of entry, reducing the chances of evasion.
- **Regulatory Function:** Indirect taxes can be used to regulate the consumption of certain goods, such as tobacco and alcohol, by imposing higher taxes on them. For instance, sin taxes on cigarettes and alcohol aim to reduce their consumption.
- **Stimulates Economic Growth:** By adjusting indirect tax rates, the government can influence economic activities. For instance, lowering GST rates on essential goods can boost consumption and stimulate economic growth.

ISSUES IN INDIRECT TAX

- **Regressive Nature:** Indirect taxes tend to be regressive, impacting low-income individuals more than high-income ones since everyone pays the same tax rate regardless of their income. For example, GST on essential commodities like food items affects poorer households disproportionately.
- **Inflationary Pressure:** Indirect taxes can contribute to inflation by increasing the cost of goods and services. For instance, an increase in fuel excise duty can lead to higher transportation costs, which in turn raises prices of goods.

- **Compliance Burden:** Businesses have to comply with various indirect tax regulations, which can be complex and time-consuming. For example, adhering to GST rules requires businesses to file multiple returns and maintain detailed records.
- **Cascade Effect:** Although measures like VAT and GST aim to mitigate the cascade effect, certain indirect taxes can still lead to tax on tax. For example, if input tax credits are not properly managed, businesses may end up paying tax on the tax component of raw materials.
- **Impact on Consumption:** High indirect taxes can discourage consumption, affecting economic growth. For example, high luxury tax rates can deter people from purchasing high-end goods.
- **Inequitable Distribution:** The uniform application of indirect taxes does not account for the varying ability to pay among different income groups, leading to an inequitable distribution of tax burden. For instance, a uniform GST rate on basic necessities impacts low-income families more significantly than wealthy ones.

GOVERNMENT INITIATIVES TO IMPROVE INDIRECT TAXATION

- **Introduction of Goods and Services Tax**: GST was introduced on **July 1, 2017** (by **101st Constitutional Amendment**) as the biggest indirect tax reform by subsuming around 17 indirect taxes such as excise duty, VAT, service tax, luxury tax etc.
- **Turant Customs**: Central Board of Indirect Taxes and Customs has rolled out faceless assessment of consignments under the initiative 'Turant Customs'.
- **Administrative Reforms**: Based on the recommendations of the Tax Administration Reforms Commission under **Parthasarathy Shome,** a **Tax Policy Research Unit** headed by the Revenue Secretary has been created for better research capability on fiscal topics and a Tax Policy.

GOODS AND SERVICES TAX (GST)

GST is an umbrella, multistage, destination based indirect tax, which subsumed taxes like central excise, service tax, additional duties of excise & customs, VAT etc. The GST was launched at midnight on 1 July 2017. It was hailed as the biggest indirect tax reform of independent India due to its composition and envisaged impact.

Here are some key aspects of GST in India:

- **Multiple Tax Levels:** India's GST system consists of multiple tax rates, with four primary tax rates (5%, 12%, 18%, and 28%), along with a few special rates for specific goods and services. Additionally, there is a "zero rate" for certain essential goods and services.
- **Destination-Based Tax:** Similar to most GST systems worldwide, India's GST is a destination-based tax. This means that the revenue generated from GST is collected by the state where the goods or services are consumed, rather than where they are produced.
- **Input Tax Credit:** Under the Indian GST system, businesses can claim input tax credit for the GST they paid on their purchases. This helps eliminate the cascading effect of taxation and ensures that taxes are levied only on the value added at each stage of the supply chain.
- **Threshold Exemptions:** Small businesses with an annual turnover below a certain threshold are exempt from GST registration and collection, which eases the compliance burden for micro and small enterprises.
- **Composition Scheme:** India's GST system includes a composition scheme for small businesses with a turnover up to a specified limit. Businesses under this scheme can pay GST at a lower rate and have simplified compliance requirements.
- **Compliance and Reporting:** Registered businesses in India are required to file regular GST returns, including details of their sales, purchases, and tax liabilities, through an online portal provided by the Goods and Services Tax Network (GSTN).
- **Goods and Services Categorization**: GST in India classifies goods and services into various tax slabs based on their nature and essentiality. This categorization is periodically reviewed and updated by the GST Council, a body consisting of representatives from both the central and state governments.
- **Anti-Profiteering Authority:** India also has an Anti-Profiteering Authority in place to ensure that businesses pass on the benefit of reduced tax rates or input tax credits to consumers by reducing prices.

GST has had a significant impact on India's economy, leading to greater transparency, reducing tax evasion, and promoting a formalized economy. However, its implementation has not been without challenges, including adapting to the multiple tax rates and addressing compliance issues. The Indian government continues to refine and streamline the GST system to make it more efficient and business-friendly.

Supreme Court judgment of May 2022 regarding the GST Council:
- **Nature of GST Council's Recommendations:** GST Council's recommendations are advisory and are not obligatory for the Union and the State governments.
- **Legislative Authority on GST:** Both the Parliament and the State Legislatures hold concurrent powers to legislate on matters related to GST.
- **Scope of Binding Recommendations:** The GST Council's recommendations are binding on the government only for secondary or subordinate legislation, such as modifications in tax rates or the formulation of rules under the CGST, SGST, and IGST Acts. However, for primary legislation (like amendments to the CGST, SGST Acts), these recommendations are merely influential and not mandatory.

TAXATION ON VIRTUAL ASSETS

The government has prepared for a particular tax framework on taxation of virtual digital assets in response to the remarkable surge in transactions in virtual digital assets.

PROPOSED TAXATION FRAMEWORK

- **Definition of Virtual Digital Assets**: The term **"virtual digital assets"** is defined under **Section 2 of the Income Tax Act**, which largely means:
  - Any information, code, number, or token excluding Indian or foreign currency which has been generated through cryptographic means or otherwise and provides a digital representation of exchanged value or can function as a store of value or a unit of account including investment schemes.
  - The central government by publication in the Official Gazette can include or exclude any other digital asset in the definition of virtual digital asset.
- **Tax on Virtual Digital Asset:** Under **Section 115BBH of the Income Tax Act**, any income from transfer of any virtual digital asset shall be taxed at the rate of **30%**.
- **Payment on Transfer of Digital Asset: 1% TDS** (Tax Deducted at Source) will be deducted **under Section 194S** on payment made above a monetary threshold in relation to transfer of virtual digital assets.

Status of Cryptocurrency in India:

The Subhash Chandra Garg Committee (2019) recommended a ban on private cryptocurrencies on account of concerns such as volatility, instability, security risk and risk of funding illegal activities.

The Government has sought to introduce the Cryptocurrency and Regulation of Official Digital Currency Bill, 2021.

This bill seeks to (a) Ban all the private cryptocurrencies (b) Issue official digital currency to be issued by RBI.

SIGNIFICANCE OF TAXING VIRTUAL DIGITAL ASSETS

- **High Volatility:** Owing to the **high volatility and risky nature of income,** people will be discouraged from investing due to high tax rates and the inability to balance losses against other sources of income.
- **Regulation of Digital Assets**: It will pave the road for virtual digital assets to be classified as a distinct asset class. Giving virtual assets as an example.
- **Dynamic Definition:** Since definitions are dynamic, the government can include or reject new virtual digital assets as needed.
- **Revenue for Government:** Taxes will aid in the **development of more revenues**, lowering the fiscal deficit, and giving funding for a country's overall economic growth.

ASSOCIATED CONCERNS

- **Broad Definition:** The broad definition of Virtual Digital Assets carries a risk of potentially including vouchers, reward points issued by shopping sites or credit card companies etc.
- **Concerns of Financial Instability:** The taxation provisions fall short in addressing concerns raised by RBI and IMF over greater financial instability from virtual digital assets.
- **Issues with Taxation Provisions:** There is lack of clarity on cost of acquisition and sales consideration along with brokerage or fair market valuation in calculating the amount for taxation.
- **Lack of Comprehensiveness:** The taxation provisions do not clearly include the income of miners, persons minting non-fungible token (NFT) etc. and also there is risk of peer-to-peer or wallet-to-wallet transactions escaping this tax.
- **Losses on Virtual Digital Assets:** Losses incurred from one kind of Virtual Digital Assets cannot be set off against gains from any transaction involving another Virtual Digital Assets while computing tax. E.g. A person making Rs. 100 gains on Bitcoin but losing Rs. 10 on Ethereum will have to pay tax on Rs. 100.

Way Forward:

- **Finalisation of Legal Status of Crypto Assets:** There is a need to expedite Cryptocurrency and **Regulation of Official Digital Currency Bill, 2021** to determine legal status of crypto assets in the country.
- **Expansion of Central Bank Digital Currency:** CBDR should be expanded to wider public to promote financial inclusion and ensure effectiveness of **RBI's monetary policy.**
- **Awareness Among Public:** There is a need to generate awareness among the public through social media and other mediums to caution the public about the volatility and risk associated with crypto assets.
- **Clarity in Taxation:** There is need to provide greater clarity about TDS process with respect to income calculation, swap transactions between two virtual digital assets etc.

GLOBAL MINIMUM CORPORATE TAX

- **Corporation Tax**: It is a direct tax imposed on the net income or profit that enterprises make from their businesses.
- **Applicability**: It would apply to companies' overseas profits. Therefore, if countries agree on a global minimum, governments could still set whatever local corporate tax rate they want.
- **Least 15% Rate**: **G7** aims to impose **Global Minimum Corporation Tax of at least 15%,** and put in place measures to ensure taxes were paid in the countries where businesses operate.
- **Avoiding Double Taxation**: If companies pay lower rates in a particular country, their home governments could **"top-up"** their taxes to the agreed minimum rate, eliminating the advantage of shifting profits to a tax haven.

Two Pillars of OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting

Pillar 1: 25% of profits of the largest and most profitable MNEs above a set profit margin would be reallocated to the market jurisdictions where the MNE's users and customers are located.

Pillar 2: It provides a minimum 15% tax on corporate profit, putting a floor on tax competition.

NEED FOR GLOBAL MINIMUM CORPORATE TAX

- **Huge Tax Loss**: India's annual tax loss due to corporate tax abuse is estimated at over USD 10 billion.
- **Reducing Tax Loss**: Income from intangible sources such as drug patents, software and royalties on intellectual property has migrated to low tax jurisdictions (tax base erosion of the higher-tax jurisdictions).
- **Loophole in Current System**: These companies typically rely on complex webs of subsidiaries to hover profits out of major markets into low-tax countries such as Ireland or Caribbean nations, Panama etc.
- **Uniformity**: GMCR will end a decades-long "race to the bottom" in which countries have competed to attract corporate giants with ultra-low tax rates and exemptions. And it will bring uniformity in corporate taxation worldwide.

INDIA'S STAND

- **Steps in the Same Direction**: In September 2019, the government had **reduced** the **corporate tax rate to 22%** for companies that gave up all exemptions and incentives. Further, a **15% rate** was offered to **new manufacturing firms.** The **effective tax rate**, inclusive of surcharge and cess, for **Indian domestic companies** is **around 25.17%.**

Recently, EU members have agreed to implement a minimum tax rate of 15% on big businesses in accordance with Pillar 2 of the global tax agreement framed by OECD.

- **Positive Interpretation**: India is likely to benefit from the **global minimum 15% corporate tax rate pact** as the effective domestic tax rate is above the threshold, and the country would continue to attract investment.
- **Open to Discussion**: While taxation is ultimately a sovereign function, and depends upon the needs and circumstances of the nation, the government is open to participate and engage in the emerging discussions globally around the corporate tax structure.

Way Forward:

- **Making Further Discussion**: Much still needs to be ironed out, especially for pillar one and its technical metrics that will determine how and to which multinational companies the tax will be applied.
- **Scope of Increased Coordination**: There should be appropriate coordination between the application of the new international tax rules including the Digital Services Taxes. Any final agreement could have major repercussions for low-tax countries and tax havens.

The step towards **Global Minimum Tax** is a laudable and fair step in the digitalised world. There is a need to work towards making this arrangement better by taking into consideration the requirements of the low-income countries to ensure that they are not at disadvantage in impending global recession and climate change.

DOUBLE TAXATION AVOIDANCE AGREEMENT (DTAA)

A Double Taxation Avoidance Agreement (DTAA) is a treaty signed between two or more countries to avoid the situation where the same income is taxed by two or more jurisdictions. The main purpose of DTAA is to make a country an attractive investment destination by providing relief on dual taxation.

Key Features of DTAA	
Elimination of Double Taxation	DTAA helps in avoiding the tax being paid twice on the same income. This is done either through the '**Exemption Method**' (income is taxed in one country and exempt in another) or the '**Tax Credit Method**' (where the income is taxed in both countries but credit for tax paid in one country is given in the other).
Reduced Tax Rates	DTAAs provide for **reduced rates of taxation on dividends, interest, royalties, and other forms of income.**
Prevention of Fiscal Evasion	DTAAs also include provisions for the **exchange of information between tax authorities** of the contracting states, which helps in preventing tax evasion.
Mutual Agreement Procedure (MAP)	This is a **dispute resolution mechanism** within DTAAs which allows authorities of the contracting states to resolve any difficulties or doubts arising as to the interpretation or application of the treaty.
Permanent Establishment	DTAAs define the concept of a '**permanent establishment**', which is crucial in determining where a company's profits are taxed.
Residency	These agreements also establish criteria to determine the **residency status of a taxpayer** to ascertain their tax liability.

DTAA AND INDIA

DTAA and India's Engagement

- India has been proactive in developing and updating its network of DTAAs to foster international trade and investment while preventing tax evasion. Key actions and examples include:
- **Broad DTAA Network**: India has established DTAAs with over 90 countries, including major economies such as the US, UK, Japan, Germany, and Singapore.
- **Renegotiations for Updating Agreements**: Significant updates include the 2016 amendment of the India-Mauritius DTAA, originally signed in 1983, to address tax evasion and misuse.
- **Incorporating Anti-Abuse Provisions**: Newer DTAAs often include anti-abuse clauses. The India-Singapore DTAA, for example, features a Limitation of Benefits clause to prevent treaty misuse.
- **Adoption of Multilateral Instrument (MLI)**: India joined the MLI in 2017 to implement BEPS measures across its DTAA network, aligning its treaties with international tax standards.
- **Exchange of Information**: India's DTAAs include provisions for exchanging tax-related information. The agreement with Switzerland enhances cooperation to combat black money.
- **Improving Dispute Resolution**: The inclusion of Mutual Agreement Procedures (MAP) in treaties, such as with the Netherlands, helps resolve tax disputes effectively.
- **Digital Taxation Initiatives**: The Equalisation Levy, targeting digital economy transactions, complements India's DTAA framework by addressing modern tax challenges.
- **Facilitating Foreign Investments**: Agreements like the India-Netherlands DTAA provide favorable tax treatments on dividends and royalties, attracting Dutch investors.
- **Harmonizing Domestic Laws**: India updates its tax laws to align with DTAA provisions, as seen after the Mauritius treaty revision.
- **Addressing Challenges in Digital Economy**: Ongoing discussions, such as with the India-France DTAA, aim to ensure fair taxation of digital companies.

These initiatives underscore India's commitment to maintaining a transparent and stable international tax framework, crucial for attracting foreign investment and fostering economic growth.

BASE EROSION & PROFIT SHIFTING AND OECD FRAMEWORK

- **Definition:** BEPS involves tax strategies used by multinational enterprises (MNEs) to exploit gaps and mismatches in tax rules across different jurisdictions, shifting profits to low-tax or no-tax locations where there is minimal economic activity.
- **Impact:** This leads to significant tax revenue losses for higher-tax jurisdictions, distorting competition and undermining tax system integrity.

Core Aspects of BEPS:

- **Profit Shifting**: Profits are transferred to low-tax jurisdictions from countries where the actual business activities and value creation occur.
- **Tax Base Erosion**: Reducing taxable income through deductions like interest, royalties, and service fees paid to related entities in low-tax jurisdictions.
- **Exploiting Loopholes**: Utilizing differences in tax laws and treaties between countries to minimize tax liabilities.
- **Transfer Pricing Manipulation**: Setting intra-group transaction prices to shift profits to low-tax jurisdictions.
- **Tax Treaty Abuse**: Using tax treaties to obtain reduced withholding tax rates or avoid taxation contrary to the treaty's intent.

OECD Framework:

- **Global Concerns**: BEPS practices result in substantial tax revenue losses globally and call for a coordinated international response.
- **OECD and G20 Project**: Initiated to develop strategies to combat BEPS, producing guidelines and recommendations known as the BEPS Action Plan.
- **Objectives:**
    - **Realign Taxation with Substance**: Ensuring profits are taxed where economic activities generating the profits are performed.
    - **Increase Transparency**: Enhancing transparency in tax matters to reduce opportunities for BEPS.
    - **Improve Coherence**: Harmonizing international tax rules to prevent gaps and mismatches.

The OECD's BEPS project represents a significant international effort to address the challenges posed by BEPS, promoting a fairer and more transparent global tax system.

India's approach to BEPS	
Adoption of BEPS Action Plan	India has been proactive in implementing the BEPS Action Plan, adopting various measures outlined in the 15-action initiative. These measures aim to address issues like transfer pricing, digital taxation, and tax treaty abuse.
Digital Taxation	India introduced the Equalisation Levy, often referred to as the "Google Tax," to tax digital transactions and services provided by non-resident e-commerce companies. This move was partly in response to BEPS Action 1, which deals with the tax challenges of the digital economy.
Transfer Pricing Rules and Documentation	India has tightened its transfer pricing regulations, aligning them with **BEPS Action 13.** This action focuses on enhancing transparency, including the introduction of **Country-by-Country Reporting (CbCR)** for large multinational groups.
Multilateral Instrument (MLI)	India has **signed the MLI**, which is a **legal instrument** developed as part of the BEPS project to enable countries to swiftly modify their bilateral tax treaties to implement BEPS measures, particularly those related to **preventing treaty abuse and artificial avoidance of permanent establishment status.**
Prevention of Treaty Abuse	In line with **BEPS Action 6**, India has been **renegotiating its double taxation avoidance agreements (DTAAs)** with several countries to include provisions to prevent treaty shopping and ensure that tax treaties do not inadvertently facilitate profit shifting.
Domestic Anti-Avoidance Rules	India has implemented **General Anti-Avoidance Rules (GAAR)** to **curb aggressive tax planning strategie**s that lack commercial substance.
Participation in Global Tax Discussions	**India actively participates in international discussion**s for a consensus-based solution on the taxation of the digital economy under the **OECD framework.** This includes engagement in the two-pillar approach to address the broader challenges posed by the digitalization of the economy.

India's response to BEPS demonstrates its commitment to aligning with global tax reforms while also addressing the unique challenges faced by its economy. The goal is to ensure a fair and transparent tax system that minimizes revenue loss and creates an equitable environment for domestic and international businesses.

PLACE OF EFFECTIVE MANAGEMENT

"Place of Effective Management" (POEM) is a concept used in tax law to determine the tax residency of a company. It plays a crucial role in deciding which country has the right to tax a company's income.

This concept is particularly important in the context of international taxation and is used to prevent tax evasion through the use of **shell companies** or other means of shifting profits to low-tax jurisdictions.

Definition: POEM is defined as the place where key management and commercial decisions necessary for the conduct of the business of an entity as a whole are, in substance, made.

KEY ASPECTS OF POEM

- **Tax Residency**: Under POEM, a company is considered a tax resident in the country where its real and substantial management activities are carried out, irrespective of where it is incorporated.
- **Decision-Making**: The focus is on where the strategic, significant, and commercial decisions that affect the company's affairs are actually made.

Implementation in India

The Finance Act 2015 introduced POEM as a test for determining the residency of foreign companies with effect from April 1, 2016. According to Indian tax laws, a foreign company is considered a tax resident in India if its POEM is in India.

Guidelines: Tax authorities have issued guidelines to provide clarity on the application of the POEM criteria, considering factors like the location of Board meetings, executive committee meetings, and where the company's senior management is based.

Key Terms: Tax Evasion, Tax Avoidance, Tax Terrorism, Transfer Pricing, Income Redistribution, Civic Consciousness, Cascading Effect, Conciliatory Approach, Non-Adversarial Taxation System, Progressive Tax, Global Minimum Tax.

Previous Year Questions		
1.	Explain the rationale behind the Goods and Services Tax (Compensation to states) act of 2017. How has COVID-19 impacted the GST compensation fund and created new federal tensions?	2020
2.	Enumerate the indirect taxes which have been subsumed in the goods and services tax (GST) in India. Also, comment on the revenue implications of the GST introduced in India since July 2017.	2019
3.	Comment on the important changes introduced in respect of the Long Term Capital Gains Tax (LTCGT) and Dividend Distribution Tax (DDT) in the Union Budget for 2018-2019.	2018
4.	There is a clear acknowledgement that Special Economic Zones (SEZs) are a tool of industrial development, manufacturing and exports. Recognising this potential, the whole instrumentality of SEZs require augmentation. Discuss the issues plaguing the success of SEZs with respect to taxation, governing laws and administration.	2015
5.	Discuss the rationale for introducing Goods and Services Tax (GST) in India. Bring out critically the reasons for the delay in roll out for its regime.	2013

6 MONETARY POLICY AND TARGETING OF INFLATION, BANKING, INSURANCE AND FINANCE IN INDIA

MONETARY POLICY

Monetary policy is a strategy by the central bank to control money supply and interest rates. It helps achieve economic goals like inflation, growth, and liquidity. In India, **the Reserve Bank of India (RBI)** is in charge of monetary policy as per the RBI Act, 1934. The RBI uses tools like open market operations, bank rate, reserve system, credit control, and moral persuasion. These tools affect interest rates and money supply, and shape the economy. The monetary policy of India has changed a lot with the new MPF, MPC, and MPP.

OBJECTIVES OF INDIA'S MONETARY POLICY

The objectives of the monetary policy highlight the ultimate goals guiding its actions within a given framework. These goals encompass crucial aspects such as price stability, economic growth, and financial stability.

1. Price Stability:
- Maintaining a stable price level is paramount, as it reduces uncertainty for businesses and consumers, promotes long-term investment, and fosters sustainable economic growth.
- The RBI currently follows a flexible inflation targeting framework, aiming for an inflation rate of 4% +/- 2% tolerance band.

2. Economic Growth:
- Monetary policy tools are used to stimulate economic activity and create an environment conducive to job creation and overall prosperity.
- This involves ensuring adequate credit flow to key sectors like agriculture, industry, and infrastructure.

3. Financial Stability:
- Maintaining a sound and stable financial system is crucial for protecting depositors, preventing financial crises, and promoting efficient allocation of resources.
- The RBI uses various instruments like bank supervision, regulations, and liquidity management to ensure the stability of banks and other financial institutions.

4. External Sector Balance:
- Managing the exchange rate and maintaining a balance of payments equilibrium are essential for facilitating international trade and investment, and preventing excessive currency volatility.
- The RBI intervenes in the foreign exchange market when necessary to stabilize the rupee and ensure orderly foreign exchange transactions.

5. Development Objectives:
- Monetary policy can play a role in supporting the government's development goals, such as poverty reduction, financial inclusion, and sustainable development.
- The RBI implements targeted credit schemes and initiatives to promote these goals and ensure inclusive growth.

MONETARY POLICY TOOLS

- **Liquidity Adjustment Facility (LAF):** The LAF refers to the Reserve Bank's operations through which it **injects/absorbs liquidity into/from the banking system.** It consists of overnight as well as term **repo/reverse repos** (fixed as well as variable rates), **SDF and MSF**. Apart from LAF, instruments of liquidity management include outright **open market operations (OMOs)**, **forex swaps** and **market stabilisation scheme (MSS).**
- **LAF Corridor:** The LAF corridor has the **marginal standing facility (MSF)** rate as its upper bound (ceiling) and the **standing deposit facility (SDF)** rate as the lower bound (floor), with the policy repo rate in the middle of the corridor.
- **Standing Deposit Facility (SDF) Rate:** The rate at which the Reserve Bank accepts non collateralized deposits, on an overnight basis, from all LAF participants.
  - The SDF is also a financial stability tool in addition to its role in liquidity management and the SDF rate has replaced the fixed reverse repo rate as the floor of the LAF corridor.
- **Marginal Standing Facility (MSF) Rate:** The penal rate at which banks can borrow, on an overnight basis, from the **Reserve Bank** by dipping into their **Statutory Liquidity Ratio (SLR)** portfolio up to a predefined limit (2%).
  - This provides a **safety valve against unanticipated liquidity shocks to the banking system.** The MSF rate is placed at **25 basis points** above the policy repo rate.

- **Repo Rate:** Repurchase Agreement or Repurchasing Option is referred to as "repo." It is the interest rate at which the Reserve Bank provides liquidity under the **Liquidity Adjustment Facility (LAF)** to all LAF participants against the collateral of government and other approved securities.
  - Repo is a process in which the **Reserve Bank of India (RBI) sells securities and subsequently buys them back at a predetermined price.** This price is determined based on an interest rate known as the repo rate.
- **Reverse Repo Rate:** The interest rate at which the Reserve Bank absorbs liquidity from banks against the collateral of eligible government securities under the LAF. Following the introduction of **SDF**, the fixed rate reverse repo operations are at the discretion of the RBI for purposes specified from time to time. Currently, the reverse repo rate is at 3.35%.

Inflation and the Repo Rate

The Reserve Bank of India utilises the repo rate as a tool to manage the money supply within the Indian market. A higher repo rate serves to decrease the borrowing capacity of commercial banks, thereby reducing the circulation of cash in the market. This approach aids in controlling inflation.

- **Cash Reserve Ratio (CRR):** CRR is the proportion of a bank's total deposits that must be maintained as cash reserves with the RBI. The central bank has the authority to adjust this ratio within certain limits.
  - A higher percentage indicates that banks have a smaller amount available for lending, which restricts liquidity. Conversely, a lower CRR has the opposite effect(Currently at 4.50% May 2024).
- **Statutory Liquidity Ratio:** The **Statutory Liquidity Ratio (SLR)** denotes the percentage of a bank's total deposits that they are required to invest in government-approved securities (typically in unburdened government securities, cash and gold).
  - A lower SLR allows banks to have a larger amount available for lending purposes. (Currently at 20.75 % May 2024).

STANCES OF RBI ON MONETARY POLICY

- **Accommodative Stance:** This means that the RBI is willing to support the economy and growth by providing ample liquidity and keeping the interest rates low. An accommodative stance signals that the RBI will not increase the policy rates unless there is a sharp rise in inflation.
- **Neutral Stance:** This means that the RBI is satisfied with the current state of the economy and inflation and does not want to change the monetary policy significantly. A neutral stance implies that the RBI will adjust the policy rates depending on the evolving economic conditions and data.
- **Hawkish Stance:** This means that the RBI is concerned about high inflation and wants to tighten the monetary policy by increasing the interest rates or reducing the money supply. A hawkish stance aims to curb inflation and cool down the economy.
- **Calibrated Tightening:** Calibrated tightening implies that, within the ongoing rate cycle, a reduction in the repo rate is not considered. However, rate hikes will occur in a measured manner. This suggests that the central bank may not opt for a rate increase in every policy meeting, but the overall policy stance leans towards an eventual rate hike.

LIMITATIONS OF MONETARY POLICY IN INDIA

- **Constrained Role in Economic Development**: The monetary policy's role in economic development is minor in practice, lacking predominant significance in the developmental process. The Reserve Bank's role is limited to ensuring uninterrupted economic development due to the availability of sufficient funds.
- **Limited Efficacy in Price Control**: The Reserve Bank's monetary policy has played a restricted role in curbing inflationary pressures, failing to achieve the goal of growth with stability. Former Governor I.G. Patel emphasises the need for a comprehensive policy framework, integrating fiscal, foreign exchange, and income policies, which is lacking in India.
- **Underdeveloped Money Market**: The money market in India is not well-developed and integrated. The unorganised money market, which consists of informal lenders and borrowers, is not affected by the monetary policy of the central bank.
- **Presence of Black Money**: The money market in India is not well-developed and integrated. The unorganised money market, which consists of informal lenders and borrowers, is not affected by the monetary policy of the central bank.
- **Influence of Non-Monetary Factors**: Monetary policy tends to overlook non-monetary factors, limiting its control over inflation originating from real factors, deficit financing, and foreign exchange resources. The Reserve Bank lacks control over deficit financing, impacting money supply.

In summary, the Reserve Bank's monetary policy faces various limitations, necessitating improvements in multiple aspects.

INFLATION TARGETING IN INDIA

Inflation targeting is a monetary policy framework adopted by central banks to achieve a specific target for the inflation rate. In India, inflation targeting was formally adopted as a monetary policy framework in 2016. Some of the key aspects of inflation targeting in India are:

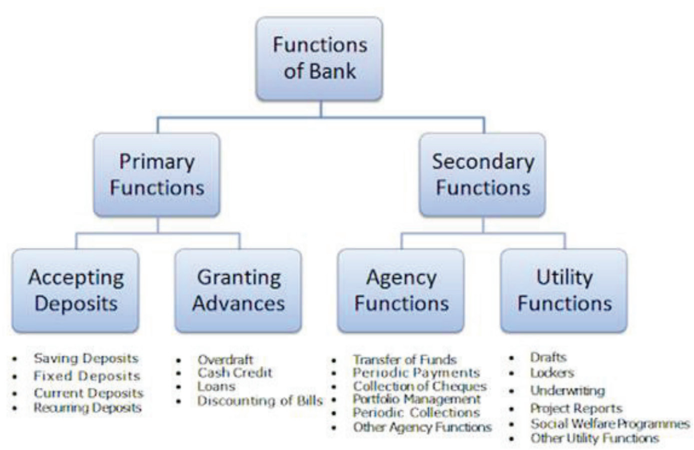
- **Introduction of Inflation Targeting:**
  - **Year of Adoption:** In February 2015, the Government of India and the Reserve Bank of India (RBI) signed a Monetary Policy Framework Agreement, introducing the concept of inflation targeting.
  - **Formal Adoption:** The framework officially came into effect in April 2016 with an amendment to the Reserve Bank of India Act, 1934.
- **Inflation Target:**
  - **Target Rate:** The RBI's inflation target is set by the Government of India in consultation with the RBI. The target is set for the Consumer Price Index (CPI), which is the main measure of inflation.
  - **Target Horizon:** The target is typically set for the medium term, usually with a horizon of around 4% with a tolerance band of +/- 2 percentage points.
- **Monetary Policy Committee (MPC):**
  - **Formation:** The MPC was constituted to decide the monetary policy actions, including setting the policy interest rate (repo rate), in order to achieve the inflation target.
  - **Composition:** The MPC consists of six members, with three members nominated by the Government of India and three members from the RBI. The RBI Governor is the ex-officio chairperson.
- **Policy Rate:**
  - **Repo Rate:** The primary tool for implementing monetary policy is the repo rate. The MPC adjusts the repo rate to achieve the inflation target.
  - **Reverse Repo Rate:** The reverse repo rate is used as a tool to absorb excess liquidity in the financial system.
- **Inflation Targeting Framework:**
  - **Flexibility:** The inflation targeting framework provides some flexibility to the MPC in achieving the inflation target. It allows for deviations from the target under exceptional circumstances.
  - **Communication:** The RBI communicates its inflation forecasts, policy stance, and the rationale behind its decisions through regular monetary policy statements and reports.
- **Review and Accountability:**
  - **Bi-Monthly Reviews:** The MPC conducts bi-monthly meetings to review economic conditions and assess whether the inflation target is being met.
  - **Accountability:** The MPC is accountable for its decisions, and it provides explanations for deviations from the inflation target.

Conclusion:

India's monetary policy navigates a complex terrain. Balancing growth and price stability necessitates skillful maneuvering of tools like interest rates, amidst challenges like inflation and global anxieties. In its hands rests the baton to orchestrate a harmonious economic symphony for the nation's future.

BANKING SECTOR

The **Indian Banking System** consists of **12 Public Sector Banks**, **22 Private Sector Banks**, **46 Foreign Banks**, **43 Regional Rural Banks, 1485 Urban Cooperative Banks** and **96,000 Rural Cooperative Banks** in addition to cooperative credit institutions. The banks are the **lifelines** of the economy and play a **catalytic role** in **activating and sustaining economic growth**.



CHALLENGES IN THE BANKING SECTOR

- **Poor Asset Quality**: These are loans which are not repaid back by the borrower and prone to become **Bad loans or NPA.**
- **Poor Capital Adequacy:** The **Capital Adequacy Ratio** measures how much capital a bank has to meet its obligations. Capital Adequacy is helpful in protecting depositors and promoting stability and efficiency.

- **Unhedged Forex Exposure:** Sharp fluctuations in the forex market can cause significant strain on Indian companies with substantial foreign borrowings, potentially impacting their ability to repay debts to domestic banks.
- **Employee and Technology:** Public sector banks especially government-owned banks have yet to fully embrace technology to offer better products and services.
- **Balance Sheet Management:** Many banks have tried to delay setting aside money as provisions and tried to **restructure loans** off-record. This is even more problematic considering the poor capital adequacy in Indian banks.
- **Politico- Bureaucratic Hurdles :** characterised by **red-tapism**, lengthy delays, lack of initiative, and slow decision-making, coupled with **political pressures** influencing personnel selection and loan approvals, has hindered the efficient functioning of banks.

VARIOUS MEASURES TAKEN TO PROMOTE GROWTH OF BANKING SECTOR

1. **Structural Measures**
   - **Big Banks**: **The Narasimham Committee Report** (1991), emphasised that India should have **three or four large commercial banks,** with domestic and international presence, along with foreign banks.
   - **Need for Differentiated Banks**: Though the **universal banking model** has been widely preferred, there is a need for **niche banking** to cater to the specific and varied requirements of different customers and borrowers.
   - **Improvement in Systems and Procedures**: Refining the systems and procedures may help banks economise their **risk-weighted assets**, which will help reduce capital requirements to some extent.
2. **Technological Measures**
   - **Advancement in Technology:** The RBI has established the Reserve Bank Innovation Hub (RBIH) in Bengaluru. Its mandate is to promote innovation across the financial sector by leveraging technology and creating an environment which would facilitate and foster innovation.
   - **Blockchain Banking:** Risk management can be more specific and the neo-banks can leverage the technology to further (digital) financial inclusion and finance higher growth of aspirational/new India.
3. **Governmental and RBI Measures**
   - **Improving governance and bringing transparency:** Banks Board Bureau providing assistance to Public Sector Banks to restructure their business strategies. Assisting banks with the strategies to deal with issues of bad loans or stressed assets.
   - **Empowering Banks:** The government should tighten the loose ends by allowing them to build diversified loan portfolios, establishing sector-wise regulators, bestowing more powers to deal effectively with wilful defaulters.
   - **Priority Sector Lending (bold):** It is a significant responsibility assigned by the RBI to banks, mandating them to allocate a portion of their loans to specific sectors such as agriculture or small-scale industries.

Conclusion

The present scenario calls for a **paradigm shift** and there has to be a **multidimensional approach** through which existing digital platforms, infrastructure, human resources, and policy frameworks are strengthened and new technological innovations are promoted to improve its resilience and maintain financial stability.

FINTECH SECTOR

INTRODUCTION

- Fintech is a broad term that encompasses technology-based enterprises that compete with, facilitate, and collaborate with financial institutions. Examples include Paytm, MobiKwik, and Google Pay.

Drivers in India:

- Increased usage of smartphones, widespread internet access, and the rise of online shopping.
- A younger population that is more tech-savvy and open to adopting digital solutions.
- Technological advancements such as Big Data, Artificial Intelligence (AI), and others.
- Enhanced financial inclusion, bringing banking and financial services to previously underserved populations.

SIGNIFICANCE OF FINTECH SECTOR

- **Digital Payments are on the rise.**
- **Peer to Peer (P2P) financing**, crowdfunding, and other new techniques have improved lending and investment.
- **Provide funds to SMEs for the exchange of invoices**.
- **Credit creation has improved** because of account aggregator services.

Recommendations of Subhash Chandra Committee to Leverage Potential of Fintech:

- **Supervision Technology Development**: Supervision technology is the use of technology by financial regulators to improve their regulatory and supervisory functions.

- **Customer Protection Legal Framework**: With the expansion of fintech and digital services, a legislative framework for consumer protection should be established.
- **Regulation Technology (RegTech) Development**: Regtech is a new sector in the financial technology business that uses information technology to improve regulatory operations.
- **Credit and insurance companies are using remote sensing and drone technology**.
- **Creating a marketplace model of debt financing** can meet the credit demands of MSMEs, families, and people.

DIGITAL LENDING ECOSYSTEM

- **Digital lending** involves the **online provision of loans through mobile apps**, with processes such as **credit assessment** and **recovery** conducted remotely.
- These service providers can be categorised into two groups- Regulated entities, including credit information companies, RBI-regulated **NBFC-Peer to Peer Lending Platforms (NBFC-P2P)**, and credit rating agencies regulated by SEBI.
- Entities that are not subject to specific regulation by any financial sector regulator.

EXISTING LEGAL FRAMEWORK FOR LENDING IN INDIA

- **Banking Regulation (BR) Act, 1949**: All banks, including small finance banks, regional rural banks, and co-operative banks, must register with the Reserve Bank of India (RBI) to engage in digital lending.
- **Reserve Bank of India (RBI) Act, 1934**: Non-Banking Financial Companies (NBFCs) involved in digital lending must be registered with the RBI in accordance with the provisions of the RBI Act.
- **Companies Act, 2013:** Companies registered under the Companies Act, 2013 are permitted to undertake lending activities. For example, Nidhi Companies are registered and regulated by the Ministry of Corporate Affairs.
- **Chit Funds Act, 1982:** Chit fund companies are regulated under the Chit Funds Act, 1982, which is a Central Act implemented by State Governments.

MODELS OF DIGITAL LENDING

- **Balance sheet lending (BSL) Model:** Banks and NBFCs lend from their own balance sheets, assuming credit risk.
- **Marketplace lending (MPL) Model:** It does not involve lending money directly and therefore does not bear credit risk. Examples of MPL include:
- **Peer-to-peer (P2P) lending platforms** that connect lenders and borrowers through an online platform. Examples include Faircent, Lendenclub, Cashkumar, and others.
- **Fintech companies** that collaborate with banks and NBFCs to facilitate loan extensions.

STATUS OF DIGITAL LENDING IN INDIA

- **Exponential growth:** Disbursed loans through digital channels have **increased by 12 times** from **2017 to 2020.**
- The value of digital lending in India rose from USD 33 billion in FY15 to USD 150 billion in FY20 and is projected to reach **USD 350 billion by FY23 (RBI report)**
- **Dominant entities: Private sector banks** hold a **55% share,** followed by **NBFCs** with a **30%** share in the **digital lending ecosystem.**
- **Loan nature:** Personal loans are the major product disbursed digitally by banks, followed by loans to MSMEs.
- **Disbursal methods:** Public sector banks primarily rely on their own apps/websites for digital loan disbursal, while private sector banks have a higher dependency on outsourced/third-party apps.

REASONS FOR REGULATING DIGITAL LENDING

- **Increase in illegal apps:** There has been a significant rise in unregistered lending apps operating without regulation or approval from the RBI, posing risks to consumers. Examples include apps like **Rupee Day, Real Rupee, and First Cash.**
- **Consumer protection concerns:** Digital lending apps may not always act in the best interests of consumers.
- **Financial sector risks:** Indiscriminate lending through digital apps without proper verification and credit appraisal processes could impact the stability of the financial sector.
- **Data breaches and leaks:** Lending apps collect sensitive user information, making them vulnerable to **cyber-attacks**.

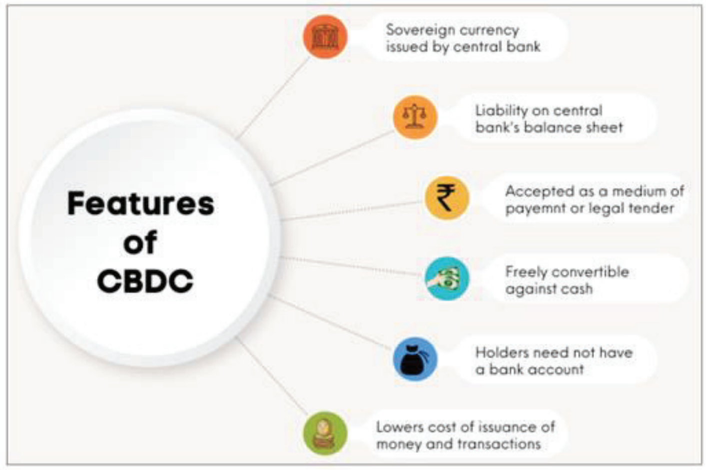
RBI'S REGULATIONS FOR DIGITAL LENDING

- **RBI** has categorised digital lenders into **three groups**: regulated entities, entities authorized under other provisions but not regulated by RBI, and entities operating outside the purview of any regulations.

- The current regulations apply only to regulated entities, while RBI has recommended that concerned regulators formulate guidelines for the second category and the central government enact a separate law to address illegitimate lending in the third category.

Conclusion

The regulation of digital lending is crucial to ensure the integrity and stability of the financial sector. It is essential to address the rise of illegal lending apps, which pose significant risks to consumers. Effective regulations will protect consumers from exploitation, mitigate financial sector risks by ensuring proper verification and credit appraisal processes, and prevent data breaches by safeguarding sensitive user information. By establishing a comprehensive regulatory framework, the digital lending ecosystem can thrive securely and responsibly, contributing to India's economic growth and financial inclusion.



CENTRAL BANK DIGITAL CURRENCY (CBDC)

The Reserve Bank of India (RBI) has initiated pilot launches of the **Digital Rupee (e₹)** for specific purposes. In October 2022, the RBI introduced the first pilot project for the **Digital Rupee in the Wholesale segment (e₹-W)**. Subsequently, the RBI operationalized the first pilot project for the **Digital Rupee in the Retail segment (e₹-R).**

About CBDC:

- Central Bank Digital Currency (CBDC) is a **legal tender** backed by the central bank, offering stability and programmable features.
- It is **recognized as a liability** on the central bank's balance sheet and its legality was established through the **amendment of the RBI Act in the Finance Act 2022.**

BENEFITS OF CBDC:

Reduces costs of physical cash management, promotes digitalization, enhances competition and innovation in payments, improves cross-border payments, boosts financial inclusion, maintains currency stability amid crypto rise, and ensures transparent, private, and final payment transactions.

CHALLENGES OF CBDC

- **Bank Disintermediation:** Poorly designed CBDC implementation may lead to adverse consequences for financial stability by displacing banks and impacting their core business.
- **Technical Hurdles:** Challenges include issues of internet connectivity, especially in rural areas, interoperability with existing systems, and cyber-attack vulnerabilities.
- **Financial Literacy:** Limited financial literacy poses obstacles for certain population segments in adopting and effectively utilizing new technologies, potentially hindering financial inclusion efforts.

Conclusion

The pilot projects initiated by the RBI will serve as a blueprint for expanding and implementing CBDC in the future, taking into account the identified benefits and challenges.

DIGITAL BANK UNITS (DBU)

- **Budget 2022-2023** dedicated **75 Digital Banking Units (DBUs)** as part of efforts to spread the benefits of digital banking to every nook and corner of India.

WHAT IS A DBU?

- A digital banking unit is a **specialised fixed point business unit** or hub housing certain minimum digital infrastructure for **delivering digital banking products** and **services** as well as servicing existing financial products and services digitally in self-service mode at any time.

RBI GUIDELINES FOR DBUS

- The RBI guidelines allow **Scheduled Commercial Banks (SCBs)** with prior **digital banking experience** to open DBUs.
- SCBs can establish DBUs in **Tier 1 to Tier 6** centers without seeking permission from the RBI.

- The DBUs will be considered as **Banking Outlets** and must have separate facilities for entry and exit.
- The guidelines emphasize the need for physical separation between the DBUs and existing banking outlets, with appropriate formats designed for digital banking users.
- Each DBU should be led by an experienced senior executive of the bank, designated as the **Chief Operating Officer (COO)** of the DBU.

NEED FOR DBU

- **NITI Aayog has released a Discussion Paper titled "Digital Banks: A Proposal for Licensing & Regulatory Regime for India", according to this:**
- **India has made rapid strides towards enabling financial inclusion** catalyzed by PMJDY and India stack. However, credit penetration remains a public policy challenge, especially for the nation's 63 million odd MSMEs.
- **With the help of unprecedented level of technology-led digitization** and digital disruption heralded by **Jan Dan-Aadhar-Mobile (JAM) trinity,** biometric Aadhar systematic., financial inclusion has become a viable reality for the citizens of India. **This has been furthered by the Unified Payments Interface (UPI)** which has witnessed extraordinary adoption.
- In parallel, India has also taken steps towards operationalizing its own version of **"Open banking"** through the **Account Aggregator ("AA")** regulatory framework enacted by the RBI.

Conclusion

The current credit gap and the business and policy constraints reveal a need for leveraging technology effectively to cater to the needs of this segment and bring them further within the formal financial fold.

DEVELOPMENT BANK FOR INFRASTRUCTURE FUNDING

- **In News**: The Central government has proposed to set up a new **Development Finance Institution (DFI)** essentially to fill the gap in long-term finance for infrastructure sectors.
- **Proposed DFI**: It will be used to finance both social and economic infrastructure projects identified under the **National Infrastructure Pipeline (NIP).** NIP will enable a forward outlook on infrastructure projects which will create jobs, improve ease of living, and provide equitable access to infrastructure for all, thereby making growth more inclusive.
- **Role of Government in DFI**: The DFI can either be promoted by the government or it should be given a private sector character with the government restricting its holding to **49%**.
- **Institutional Framework for Development Banking**: Soon after independence, the institutional framework for development banking began- **IFCI** (1948), **IDBI** (1964), IIBI (1972), **NABARD** (1982) and **EXIM Bank** (1982), **SIDBI** (1990), etc.

FINANCIAL INCLUSION

RBI defines **financial inclusion as** the process of **ensuring access** to financial **services** and timely and adequate **credit** where needed by **vulnerable groups** such as weaker sections and low-income groups at an **affordable cost.**

SIGNIFICANCE OF FINANCIAL INCLUSION

- **Economic Growth :** Financial inclusion brings untapped sections of the population into the banking sector. It improves the overall savings in the economy, which in turn pools investment resources for economic growth.
- **Poverty Alleviation :** Financial inclusion leads to increased access to financial services. It means better reach of banking services. Which makes it easier for people to access poverty alleviation e.g. DBT, MGNREGA etc.
- **Reduces Leakage:** Financial inclusion makes it easier to deliver the social services to the targeted population. It helps in curbing leakages and corruption.
- **Timely Delivery of Services:** Direct Benefit Transfer helps in removing delays and hence results in timely delivery of services.
- **Women Empowerment:** Inclusion of females in the financial sector makes them financially independent and secure.
- **Promotion to Digital Economy:** Financial inclusion leads to better penetration of online payment services and hence gives support to digital and cashless economy.

STEPS TAKEN IN DIRECTION OF FINANCIAL INCLUSION

- **Jan Dhan Aadhar (JAM):** The government of India introduced **Jan Dhan Yojana** to provide banking services to a particular section of population, and along with Aadhar and mobile it is critical in transferring cash benefits directly to the beneficiaries.

- **Initiatives by RBI and NABARD:** Both **RBI and NABARD** have taken numerous steps to improve financial inclusion. These include opening of bank branches in remote areas, linking self help groups with banks and issuing Kisan Credit Cards etc.
- **Digital Payments:** NPCI has introduced **UPI** which has revolutionised the online payments sector.
- **Project Financial Literacy:** The RBI has launched Project Financial Inclusion to spread information and awareness about central bank and general banking concepts to various target groups, including, school and college going children, women, rural and urban poor, defiance personnel and senior citizens.
- **Pocket Money:** Securities and Exchange Board of India (SEBI) and National Institute of Securities Markets (NISM's) launched this programme to increase financial literacy among school students.

CHALLENGES IN FINANCIAL INCLUSION

1. **Issues with respect to Digitalization:**
    a. **Digital Divide:** There is an inequality in case of access to digital services in India. e.g. According to the **India Inequality Report 2022** by Oxfam, only 31 percent of the rural population uses the Internet compared to 67 percent of urban population.
    b. **Digital Literacy:** Many of the users lack the basic skills to use digital services. **20%** of Indians above the age of 5 years had basic digital literacy.
    c. **Digital Infrastructure:** There are concerns related to digital infrastructure as well. According to **NSO, only 15%** are connected to the internet.
2. **Lack of Access to Banking:** Although the Jan Dhan Yojana has provided bank accounts to people but still there is a gap that needs to be filled. In a country of **140 crore**, **only 51.04 crore Pradhan Mantri Jan Dhan Yojana (PMJDY) accounts have been opened.**
3. **Lack of Identification Documents:** Many beneficiaries fail to avail banking services due to lack of formal identification documents.
4. **Gender Gap:** The gender inequality also affects the process of financial inclusion. As per data from **Findex**, approximately **1.1 billion of the 2 billion** unbanked individuals around the world are women.
5. **Rural-Urban Divide:** For per 1 lakh adults, there are **only 14.6 banks** in India. This even gets worse in the case of rural areas, where the lack of access to banking infrastructure combines with lack of staff and connectivity issues, to further deteriorate the matter.
6. **Issues with DBT:** The DBT suffers from multiple issues including **lack of grievance** redressal mechanism, lack of awareness among beneficiaries and lack of accountability.

Way Forward

- **Increase Banking Penetration:** Since the brick and mortar banks can't be built in every corner of the nation, the banking correspondents can be used to increase the reach of banking services. The banking correspondents can be encouraged by providing better incentives and commission.
- **Utilize Available Infrastructure and Resources:** As we know India has a large network of Post offices and Fair price shops. These can be utilized to provide banking counters to the unbanked section.
- **Diversify the Banking Products:** The one size fits all approach can be dropped and different schemes and products can be introduced on the basis of nature of employment, level of income and place of residence (rural/urban).
- **Address Technical Concerns:** The connectivity issues in remote areas can be dealt with using innovative ideas and handheld devices can be upgraded in such a manner that they contain basic information even when they are offline.
- **Increasing Awareness:** To improve awareness among the beneficiaries, advertisements on TV/Radio/Newspapers can be done in local languages, using local icons and artists as brand ambassadors.
- **Leverage the Support of Local Bodies:** The Panchayati Raj institutions, municipalities and city councils can help in identifying as well as encouraging the unbanked to start operating in formal banking channels.

AN ANALYSIS OF JAM

- **In the News:** Nine Years Of Pradhan Mantri Jan Dhan Yojana
- PM Jan Dhan Yojana **- The National Mission for Financial Inclusion** completed 9 years in August 2023.
- To address issues with the existing framework, the government came up with the JAM initiative. The purpose of this initiative was to link **Jan Dhan accounts**, **Mobile numbers** and **Aadhar cards of Indians** to directly transfer subsidies to intended beneficiaries and eliminate intermediaries and leakages.
- PMJDY was launched as The **National Mission for Financial Inclusion** on **15th August 2014.**

Achievements Under PMJDY

PMJDY Accounts	• **As on 29.11.2023, a total of 51.04 crore Pradhan Mantri Jan Dhan Yojana (PMJDY) accounts have been opened.**
Operative PMJDY Accounts	• Out of the 51.04 crore accounts, around 86.3% **were operative**. • As per RBI, an account is considered inoperative if there are no transactions for a period of two years.

IMPACT OF PMJDY ON THE FINANCIAL SYSTEM

- **Prevent Leakage**: DBTs have empowered and provided financial security to the vulnerable sections of society via PMJDY accounts as well as ensured every rupee reaches its intended beneficiary and prevented systemic leakage.
- **Financial Inclusion**: PMJDY has been the foundation stone for people-centric economic initiatives. Whether it is DBTs, COVID-19 financial assistance, PM-KISAN, increased wages under MGNREGA, which PMJDY has nearly completed.
- **Formalization of the Financial System**: Jan dhan provides an avenue to the poor for bringing their savings into the formal financial system, an avenue to remit money to their families in villages besides taking them out of the clutches of the usurious money lenders.

CHALLENGES ASSOCIATED WITH THE PMJDY

- **Financial and Technological Illiteracy**: Rural people lack the financial literacy, awareness, information, and skills needed to make educated savings, borrowing, investment, and expenditure decisions.
- **Connectivity Issues:** In the hinterlands and steep parts of the Northeast, Jammu and Kashmir, there is a lack of physical and digital connectivity.
- **Problems with Technology**: Banks are affected by issues ranging from inadequate connection, network outages, power shortages, and bandwidth issues to managing infrastructure maintenance expenses.
- **Managing the Business Correspondents (BC) Ecosystem**: Because of the following factors, it is a difficult and time-consuming process for banks.
- Delay in BC paying villages subsidies and payments under MGNREGA, DBT, pensions, and other programmes.
- The Bank's unwillingness to scrutinise BC's operations.
- There are no efficient grievance redressal processes in place.

STEPS NEEDED TO OVERCOME THESE CHALLENGES

- **Financial empowerment**: Moving from financial inclusion to financial empowerment through credit is necessary in the future.
- **Developing Digital Infrastructure**: This would necessitate a shift away from cash transactions and toward digital transactions, as well as the development of credit models employing artificial intelligence approaches to encourage the use of digital payments, such as the RuPay debit card, among PMJDY account users.
- **Providing on time Information**: Improving PMJDY account holders' access to microcredit and micro-investment opportunities, such as flexi-recurring deposits.
- **Create an inclusive database**: It is necessary to create a database that captures the income and transaction history of Jan Dhan account users so that credit distribution models may be developed.

Conclusion

The banking sector in India continues to evolve amidst challenges and reforms. While it grapples with issues of non-performing assets, frauds, and regulatory lapses, it also showcases resilience through systemic reforms, technological advancements, and revised governance frameworks. Stricter regulations, digital innovations, and revised lending practices are reshaping the sector's landscape, aiming to enhance transparency, customer service, and risk management. Despite the hurdles, the sector remains a critical pillar of the economy, adapting to changing demands and striving for greater financial inclusion, stability, and efficiency.

Key Terms: Poverty Alleviation, Social Justice, Leakages, Administrative costs, Economic Growth, Qualified Basic Income, Employment Opportunities, Digital Banks, Jan Dan-Aadhar-Mobile, Banking Outlets, Account Aggregator,

	Previous Year Questions	
1.	Pradhan Mantri Jan Dhan Yojana (PMJDY) is necessary for bringing unbanked to the institutional finance fold. Do you agree with this for financial inclusion of the poor section of Indian society? Give arguments to justify your opinion.	2016

7 FINANCIAL SECTOR

- The financial industry is comprised of various entities, including commercial banks, non-banking financial firms, investment funds, money markets, insurance and pension companies, and real estate organisations.
- The Financial Sector lies at the heart of an economy, allowing for the **efficient mobilisation and distribution of financial resources.**
- It works with **customers in the business and retail sectors** to provide **financial services**.

FINANCIAL MARKET

- A financial market is a market that brings buyers and sellers together to trade in financial securities or assets such as stocks, bonds, derivatives, currencies etc.
- The financial market consists of **two major segments:**
  - Money Market: It is for short-term credit and includes call money, treasury bills, commercial papers etc.
  - Capital Market: It is for long-term credit and includes primary market (IPOs etc.) and secondary market (equity market, debt market etc.)

IMPORTANCE OF THE FINANCIAL MARKET

- **Fuel India's Growth**: Vital for investment in the **National Infrastructure Pipeline**, aiding the goal of a **$5 trillion economy**.
- **Reduce Burden on Banks**: Eases pressure on banks for long-term financing, mitigating **NPA issues**.
- **Monetary Policy and Government Financing**: Facilitates **RBI's monetary policy** and helps the government meet financial needs through instruments like **open market operations** and **ways and means advance**.
- **Green Growth**: Supports **green bonds** for India's **net-zero targets** by 2070.
- **Global and Retail Investment**: Attracts investment from **FPIs** and promotes **retail investment**, channeling savings into profitable avenues.
- **Social Development and Urban Governance**: Channels investment to social sectors via **social stock exchange** and empowers urban local bodies through **municipal bonds**, inspired by models from **Brazil and South Africa**.

ISSUES WITH THE FINANCIAL MARKET

- **Technical Nature**: The complexity of the financial market is not easily understood by common people.
- **Fluctuations**: The market is highly influenced by the policies of developed countries, e.g., **FPIs pulled out ₹1.34 lakh crore** in 2022.
- **Prone to Scams**: Susceptible to scams and manipulation, e.g., the **Harshad Mehta scam**.
- **Risky Nature**: Households prefer safer investments like **FDs and RDs** due to the market's inherent risks.
- **Unorganised Financial Market**: The unregulated money market creates debt traps, operating outside regulatory oversight.
- **Insider Trading**: Involves the misuse of non-public information for personal gain.
- **Multiple Interest Rates and Fund Shortages**: The market suffers from multiple interest rates and fund shortages due to low savings and lack of banking habits, leading to seasonal fluctuations in rates.

INITIATIVES FOR REFORMING THE FINANCIAL MARKETS

- **Foreign Exchange Management Act, 1999:** Regulates all foreign securities or exchange transactions, ensuring oversight.
- **SEBI (Prohibition of Insider Trading) Regulations, 2015:** Monitors and reports trading by designated employees and connected persons, aiming to prevent insider trading.
- **National Bank for Financing Infrastructure and Development:** Established to provide infrastructure financing, addressing sectoral funding needs.
- **Retail Direct:** Introduced by RBI, streamlining individual investment in government securities, enhancing accessibility.
- **Tightening of Disclosure Norms:** SEBI mandates increased disclosure for IPO-bound companies, improving transparency.
- **Norms on Alternative Investment Funds:** Amended rules for AIFs ensure investor protection, appointing registered custodians.
- **SEBI (Credit Rating Agencies) Regulations, 1999:** Provides transparency and enhances the rating process, ensuring credibility.

- **Shortening of Settlement Cycle:** Optional T+1 settlement reduces default risks, lowers margins, and increases liquidity.
- **Framework for Social Stock Exchange:** SEBI's framework facilitates registration of not-for-profits, enhancing transparency in the social sector's financial operations.

WAY FORWARD

- **TK Viswanathan Committee on Fair Market Conduct**: The committee was constituted to recommend measures to **tackle insider trading**. It submitted its report in 2018 and recommended:
  - Companies to maintain details of immediate relatives of designated persons who might deal with sensitive information.
  - Giving direct power to SEBI to tap telephones and other electronic communication devices.
- **Focus on Tier-II and Tier-III Cities:** There should be focus on these cities to tap retail investors with appropriate analytics, including stock performance metrics etc.
- **Legal and Regulatory Framework:** There should be a legal and regulatory framework that ensures **investor protection** by acting as a deterrent against market abuse and malpractices.
- **Regulate Unethical Selling:** Stringent measures should be taken against companies as well as financial intermediaries engaged in unfair or unethical buying/selling practices.
- **Reforming Credit Rating Agencies:** The working and financing of credit rating agencies should be reformed with investor-pay model (as against Issuer-pay model), higher transparency standards while issuing ratings etc.
- **Carbon Market:** For green growth of the economy, there is a need to establish a strong carbon market that can improve the efficiency of the economy with alternative modes of finance.
- **Financial Redressal Agency (FRA):** A FRA can be set up to handle consumer complaints so as to take it out of the ambit of the regulator.

CORPORATE BOND MARKET

- **Definition of Bonds:** Bonds serve as loan contracts detailing repayment and maturity terms between an issuer and holder, issued at either a discount or premium with a face value to be repaid upon maturity.
- **Corporate Bonds:** Debt securities issued by private and public enterprises, offering investors predetermined interest payments in exchange for capital.
- **Security of Repayment:** The company's ability to repay the bond acts as security, often based on future revenue and profitability forecasts, with physical assets potentially serving as collateral.
- **Demand Disparity:** Corporate bonds from established, profitable companies (blue-chip) remain in higher demand compared to those from newly established or loss-making enterprises.

NEED FOR CORPORATE BOND MARKET

- **Alternative Finance Source:** A robust corporate bond market can replace bank loans for long-term financing, attracting investment from entities like insurance companies and pension funds into long-term assets.
- **Cost Reduction in Lending:** Enhanced competitiveness and varied capital-raising options lower the cost of lending for corporates.
- **Business Facilitation:** Improved capital access accelerates enterprise growth, thereby enhancing the ease of doing business.
- **Support for Startups:** Emerging tech startups require funding for expansion, which can be facilitated by the corporate bond market, as evidenced by unicorn startups utilizing this avenue for capital.
- **Corporate-Led Development:** By easing the government's investment burden, the corporate bond market fosters corporate-led development, complementing governmental efforts.

PRESENT STATUS OF CORPORATE BOND MARKET IN INDIA

- The **bond market in India** stands at around **$1.8 trillion**, which is further split into **$1.2 trillion** for **government securities** and **$0.6 trillion** for **corporate bonds.**
- As per **Crisil report (2023) the total corporate bond market in India is expected to double and reach ₹65-70 lakh crore by 2025.**
- **Corporate Bond Market as percentage of GDP is highest at 120 in the U.S., while in India, it is only 18% as against 80% in Korea** and **36% in China**. Although, the size of the corporate bond market in India lags behind other Asian nations such as South Korea, Thailand, China and Malaysia etc., it is catching at a faster rate.
- **Record Mobilization in Corporate Bond Market:** India's corporate bond market reached a historic high, with approximately Rs 9,97,804 crore (1.2 trillion) mobilized through private placements in FY 2023-24, marking a 17% increase from the previous year.

- **Dominance of Financial Institutions and Banks:** Financial institutions and banks led in mobilization, raising Rs 4,67,995 crore, reflecting an 8% growth from the previous year, showcasing their continued reliance on corporate bonds for funding.
- **Sharp Increase in Private Sector Participation:** The private sector, excluding banks and financial institutions, experienced a significant surge, raising Rs 4,96,446 crore, marking a remarkable 44% rise compared to FY 2022-23.
- **Stable Presence of Government Entities:** Government entities collectively mobilized 39% of the total amount, with a slight decrease from 41% in the previous year. All-India Financial Institutions/Banks dominated with a 91% share, followed by PSUs with an 8% share.
- **Sector-wise Summary:** The Banking/Financial Services sector remained dominant, raising 73% of the total amount, followed by the Housing/Civil Construction/Real Estate sector with a 6% share.
- **Growth in Public Bonds Market:** Public bonds market witnessed a significant surge, with 48 issues raising Rs 20,787 crore, a near 179% increase from the previous year. The largest issue was by Power Finance Corp., raising Rs 2,824 crore.
- **Rise in Overseas Bonds:** Indian companies also raised Rs 3.79 lakh crore through overseas borrowing, marking a 71% increase from the previous year's Rs 2.22 lakh crore, showcasing a growing trend in overseas bond issuance.

CHALLENGES FACED BY CORPORATE BOND MARKET:

- **Size Constraints:** Despite recommendations and India's GDP exceeding Two Trillion Dollars, the corporate bond market remains small.
- **Regulatory Hurdles:** Efforts by SEBI and the government to develop the market have not fully addressed regulatory concerns, keeping it underdeveloped compared to bank lending.
- **Preference for Sovereign Bonds:** Government bonds attract more attention, crowding out private borrowers.
- **Financial Illiteracy:** Limited understanding of corporate bonds among investors, who prefer traditional investment tools like shares and government bonds.
- **Corporate Dominance:** Market dominance by a few large corporations limits diversity and growth opportunities.

STRATEGIES FOR FURTHER DEVELOPMENT

- **Further Increase in Participation of Corporates:** The increase in participation of corporates in the bond market will lead to a simultaneous growth of the bond market and further open up more avenues for institutions to participate.
- **Regulator Overdrive:** A regulatory push to increase the share of public issues could diversify the investor base and bring more transparency. One of the reasons why the corporate bond market has been thin in India is the dominance of private placements in the primary market. Less than 2% of the funds are raised through public issues.
- **Robust Credit Swap Market:** It can also improve trading in lower-rated papers. It will allow insurance companies, in particular, to participate in the corporate bond market by providing protection against defaults.
- **Democratisation of the Bond Market:** To fuel the growth of the Indian Economy.

Key terms:
New Age Startups, Ease of Doing Business, Corporate-led Development, National Infrastructure Pipeline, Retail Investment, Green Growth, National Bank for Financing Infrastructure and Development, Social Stock Exchanges, Asset Monetization Plan, Democratization of Bond Market, Scale Based Regulation.

	Previous Year Questions	
1.	Investment in infrastructure is essential for more rapid and inclusive economic growth". Discuss in the light of India's experience.	2021
2.	Explain the meaning of investment in an economy in terms of capital formation. Discuss the factors to be considered while designing a concession agreement between a public entity and a private entity.	2020

8 INDIA'S EXTERNAL SECTOR

INTRODUCTION

The external sector encompasses a wide range of economic activities conducted in foreign currency, including exports, imports, foreign investments, external debt, current account transactions, capital account transactions, and the overall balance of payments.

IMPORTANCE OF EXPORT FOR INDIAN ECONOMY

- India's goal of reaching a **$5 trillion economy by 2027-28** is inextricably connected to a focus on exports.
- Prior to the LPG reforms, inward-oriented and protectionist policies had a negative impact on the economy, resulting in lower exports, lower foreign investment, inferior industry competitiveness, and a lower GDP growth rate overall.

TRENDS IN EXTERNAL SECTOR- OBSERVATIONS OF FAMILY SURVEY 2022-23

- **Goods:** India achieved an **all-time high annual merchandise export of USD 447.46 Billion in FY 2022-23 (April-March).** Significant strides in exports were registered in drugs and pharmaceuticals, electronic goods and organic and inorganic chemicals sector in FY '22.
- **Services:** The estimated value of services export for FY 2022-23 (April-March) is USD 322.72 Billion as compared to USD 254.53 Billion in FY 2021-22 (April-March). **India is 7th Largest service exporter in the world.**
- India's overall exports (Merchandise and Services combined) in FY 2022-23 (April-March) is estimated to be USD $770.18 billion showing a positive growth of 13.84 per cent over FY 2021-22 (April-March).
- **India's Forex Reserves** as of the 2024, stood at $6,41,590 million, according to the Reserve Bank of India.
- **Ratio of External Debt to GDP** is at a comfortable level of **18.61 per cent as at end-September 2023.**
- **Decline in FDI inflows:** FDI inflows decline 13% to $32 billion in April-December 2023.

EXPORT LED GROWTH MODEL FOR INDIA

- An export-led growth strategy is **one where a country seeks economic development by opening itself up to international trade**. India has set for itself the goal of **$2 trillion export by 2027.** India aims to **raise the share of its exports in global trade** to **3% by 2027** and **10% by 2047** from the **current 2.1%.**

DIFFICULTIES IN PROMOTING EXPORTS

- **Low Market Penetration in High-Income Countries**: India's exports shifted disproportionately from traditional rich-country markets to new destinations, such as Africa.
- **Specialisation vs. Diversification**: Indian exports are characterised by a high degree of diversification and a low level of specialisation.
- **Protectionism:** Rising Protectionist Policies in importing countries.
- **Regional Disparities:** As **70%** of India's exports are dominated by five states - Maharashtra, Gujarat, Karnataka, Tamil Nadu, and Telangana.
- **Various Factors:** Apart from these factors**, Higher Logistics Cost, Poor Innovation, Dominance of Dwarf Firms in MSME Sector and Lack of Market Intelligence hindering the growth of export in India.** Various factors such as **poor infrastructure, complicated land and labour markets** have made it difficult for Indian businesses to compete in global markets.

ROAD AHEAD

- **Enhancing Competitiveness:** Improve trade competitiveness by enhancing infrastructure, reorienting SEZs, and diversifying the product basket.
- **RoDTEP Scheme:** Launched to replace MEIS, providing exporters reimbursement of taxes/duties/levies to boost exports.
- **Domestic Market Protection:** Shield the domestic market from cheap foreign goods through regulatory measures.
- **Policy Stability for Supply Chain Diversification:** Offer policy stability to benefit from the global trend of diversifying supply chains away from China, post-Covid.
- **Increased Access to Finance:** Exim Bank plans to raise $3 billion via overseas bonds to support small businesses and refinance old debts, while initiatives like IndiaXports aim to boost MSME exports by 50%.

- **Integration into Global Value Chains:** Attract large corporations to establish operations in India, integrating into global value chains.
- **Intellectual Property Rights Strengthening:** Implement the National Intellectual Property Awareness Mission (NIPAM) to enhance IP awareness and training, promoting India's intellectual property rights regime.

India's Foreign Trade Policy (FTP) 2023

- **Objective:** It is expected to boost exports amid slowing global trade.
- **Duration:** 2023-2028
- **Vision:** To take India's goods and services exports to $2 trillion by 2030.
- **Highlights:** Based on 4 Pillars:
  - Incentive to Remission,
  - Export promotion through collaboration - Exporters, States, Districts, Indian Missions,
  - Ease of doing business, reduction in transaction cost and e-initiatives and
  - Emerging Areas – E-Commerce Developing Districts as Export Hubs and streamlining SCOMET policy.

Key Provisions:

- **Process Re-Engineering and Automation:** It codifies implementation mechanisms in a paperless, online environment, building on earlier 'Ease of Doing Business' initiatives.
- **Towns of Export Excellence:** Four new towns, namely Faridabad, Mirzapur, Moradabad, and Varanasi, have been designated as Towns of Export Excellence (TEE) in addition to the existing 39 towns.
- **Recognition of Exporters:** Exporter firms recognized with 'status' based on export performance will now be partners in capacity-building initiatives on a best-endeavour basis.
- **Promoting Export from the Districts:** Building partnerships with State governments and taking forward the Districts as Export Hubs (DEH) initiative to promote exports at the district level and accelerate the development of a grassroots trade ecosystem.
- **Streamlining SCOMET (Special Chemicals, Organisms, Materials, Equipment and Technology) Policy:** It has been made more robust to implement international treaties and agreements entered into by India.
- **Facilitating E-Commerce Exports:** FTP 2023 outlines the intent and roadmap for establishing e-commerce hubs and related elements such as payment reconciliation, book-keeping, returns policy, and export entitlements.
- **Facilitation under Export Promotion of Capital Goods (EPCG) Scheme:** The EPCG Scheme, which allows import of capital goods at zero Customs duty for export production, is being further rationalised.
- **Amnesty Scheme:** In line with "Vivaad se Vishwaas" initiative, which sought to settle tax disputes amicably, the government is introducing a special one-time Amnesty Scheme under the FTP 2023 to address default on Export Obligations.

FOREIGN EXCHANGE/FOREX RESERVES

- Forex is an **important component of the Balance of Payment and an essential element in the analysis of an economy's external position**.
- **In News**: RBI data showed that the country's foreign exchange reserves currently stand at **stood at $6,41,590 million, in month of may 2024, according to the Reserve Bank of India.** which had reached an all-time high of $645 billion in October 2021.

Facts and Data

- **RBI Act, 1934** and the **Foreign Exchange Management Act, 1999** set the legal provisions for governing the foreign exchange reserves.
- **Majority of Reserve:** As much as **76% of the foreign currency reserves** is held in securities like **Treasury bills** of foreign countries, mainly the USA, **23 percent** is **deposited in foreign central banks.**
- **Gold Reserves**: India held **794.64 metric tonnes of gold (including 56.32 metric tonnes of gold deposits) as of March 2023**, with **437.22 metric tonnes** being held overseas in safe custody with the Bank of England and the Bank for International Settlements.

IMPORTANCE AND FUNCTIONS OF FOREX RESERVES

- **Cushion against Forex Market Volatility**: According to a report by **Goldman Sachs**, stronger foreign currency reserves will allow developing market central banks to "**buffer their currencies against sharp declines by supplying dollars to the market"** at times of volatility.

- **Comfort for RBI**: The government is in a comfortable position if there are **rising forex reserves** and the RBI in managing India's external and internal financial issues at a time of major contraction in economic growth.
- **Fulfilling External Obligations**: It assists the government in meeting its foreign exchange needs and external debt obligations.
- **Appreciation in Rupee**: The rising foreign exchange reserves has helped the rupee to strengthen against the dollar.
- **Crisis Management**: Rising Forex Reserve serves as a cushion in the event of a Balance of Payment crisis on the economic front if it is enough to cover the import bill of the country for a year.
- **Confidence in the Market**: Forex Reserves will provide a level of confidence to markets and investors that a country can meet its external obligations.
- **Keeps Fixed Rate**: Countries with a floating exchange rate system use forex reserve to keep the value of their currency lower than the US Dollar.
- **Maintains Liquidity**: To maintain liquidity in case of an economic crisis.
- **Keeps the Market Steady**: The central bank (RBI) supplies foreign currency to keep markets steady.

CAPITAL ACCOUNT CONVERTIBILITY

RUPEE CONVERTIBILITY IN INDIA

- **Full Rupee Convertibility on Current Account:** The Current Account within the Balance of Payments (BoP) encompasses various transactions such as imports, exports, remittances, gifts, and donations. India adopted full Rupee Convertibility for these transactions in 1993.
- **Partial Rupee Convertibility on Capital Account:** Capital Account Convertibility (CAC) extends beyond currency convertibility; it includes the freedom to invest in financial assets of other nations.

The **Tarapore Committee** on Capital Account Convertibility (1997) provided a working definition: "CAC entails the freedom to convert local financial assets into foreign financial assets and vice versa at market-determined exchange rates. It involves changes of ownership in foreign/domestic financial assets." Thus, it involves relaxing restrictions on capital movements (e.g., FDI, FPI) between countries.

TRADE SETTLEMENT IN RUPEES

- RBI issued a circular to facilitate international trade settlement in Rupees.
- Seen as a significant move with various benefits, including bypassing economic sanctions, reducing exchange rate risks, and fostering trade.
- Enables trade with sanctioned countries like Russia and Iran, reducing dependency on USD.
- Can potentially lead to the internationalization of the Rupee currency.

PRESENT STATUS OF SETTLEMENT IN INDIA'S INTERNATIONAL TRADE

- Typically, international trade settlements occur in foreign currencies, predominantly in USD due to its status as the world's reserve currency.
- In 2014, 87% of Indian exports were invoiced in USD, with 8% in euros, showcasing the dominance of USD in trade transactions.

NEED FOR INTERNATIONAL TRADE SETTLEMENT IN RUPEES

- **Bypass Economic Sanctions:** Facilitates trade with sanctioned countries like Russia and Iran, especially crucial for accessing lower-priced crude oil.
- **Internationalization of Rupee:** Increased demand for Rupees in settlement can lead to its wider acceptance globally.
- **Less Volatility in Exchange Rate:** Trade in Rupees can mitigate risks associated with fluctuations in USD exchange rates, reducing dependency on US Fed policies.
- **Save Forex Reserves:** Settlement in Rupees can help mitigate trade deficits and preserve India's foreign exchange reserves.

RBI'S SYSTEM FOR INTERNATIONAL TRADE SETTLEMENT IN RUPEES

- Amendments to FEMA, 1999 Act allow Indian banks to open Special Rupee Vostro Accounts for partner trading countries.
- Key features include invoicing in INR, market-determined exchange rates, and settlement in Indian Rupees for international trade transactions.

Indian exporters will receive their export earnings in Indian Rupees (INR) from the funds in the specified Special Vostro account of the correspondent bank in the partner country. Likewise, Indian importers will settle their payments in INR, which will be deposited into the Special Vostro account of the correspondent bank in the partner country.

DEPRECIATION OF RUPEE

- Depreciation of Rupee means the **fall in the value of rupees** in comparison to the US Dollar. It means that the **demand for Rupee** has **decreased** in the international market.
- Rupee **depreciated by 32.2% against a 40-currency basket and 40.2% against a 6-currency basket in 2024.**

REASONS FOR DEPRECIATION OF RUPEE

- **Crude Oil Prices:** The crude oil prices have increased in the recent past due to geopolitical reasons such as Russia-Ukraine war and has impacted Indian rupee negatively as India imports around 85% of its crude oil demand.
- **Monetary Policy Tightening:** After easing liquidity post COVID-19, the central banks, especially US Federal Reserves, around the world are going for tight monetary policy which is increasing demand for dollars.
- **Capital Outflows:** The increasing interest rates in the developed countries has led to outflow of FPIs (Rs. 1.34 lakh crores in 2022). This increased the supply of rupees.

POSITIVE IMPACT OF RUPEE DEPRECIATION

- **Boost to Exports:** Theoretically, a weaker rupee gives a boost to India's exports by making it cheaper for foreign buyers. This can boost domestic production as well.
- **Gain for IT Sector:** Indian **IT Sector** is based on **export of services** and therefore depreciating rupees has increased the revenues of the IT sector.
- **Boost to Tourism:** A depreciating rupee makes **travel to India cheaper** and therefore has a potential to increase domestic footfall of tourists.
- **Real Estate Sector:** Depreciating rupee **makes the cost of buying property by foreign investors and NRIs cheaper** especially in the luxury properties.
- **Improved Metal Stocks:** India is one of the top producers of crude steel in the world with high export-orientation and depreciating rupees has led to increased revenue for the sector.
- **Greater Remittances:** Depreciating rupees improves gain for those remitting money to India.

NEGATIVE IMPACT OF RUPEE DEPRECIATION

- **Current Account Deficit:** Depreciating rupees widens the Current Account Deficit (CAD) for the economy as India is a net importer. **E.g. India's current account deficit (CAD) narrowed to 1.2 per cent of GDP in the October-December, 2023.**
- **Import Bill:** Depreciating rupee increases the import bill for raw materials, fertiliser, equipment or other supplies.
- **Higher Inflation:** It leads to higher inflation due rise in crude oil prices, edible oil etc. and their multiplier effects.
- **Decline in Import Cover:** Because of rise in import prices, e.g. India's import cover is 9.4 months in Feb 2023, which was over 15 months in September 2021.
- **Discouraging Foreign Investors:** A continuous decline in rupee value discourages foreign investors from making fresh investment which further depreciates rupees. E.g. pulling out of FPIs.

SAFEGUARD MECHANISMS

- **Import Substitution:** There is a need to reduce the import of crude oil with promotion of renewable energy for **Energy Security**.
- **Managing Depreciation:** RBI can manage depreciation of rupees with market intervention such as selling off some **Forex Reserves**.
- **Boosting Confidence:** The confidence of **FPIs** in the Indian economy should be increased by **arresting continuous slide in exchange rate** through **inflation control** and enhancing the government revenues.
- **Internationalisation of Rupees:** The Indian rupee can be used for payment settlement with countries like Russia, UAE etc. to promote demand for the rupee.
- **Increasing Indian Equities:** Big companies can be encouraged to become part of major global indices such as Morgan Stanley Capital International which would increase the weight of Indian equities in these indices and compensate for FPIs outflow.

INTERNATIONALISATION OF RUPEE

In News: The government through **Foreign Trade Policy, 2023** has aimed to push towards internationalising rupees in foreign trades.

Meaning of Internationalisation of Rupee

- It is a process in which there is increasing use of the Indian rupee for cross-border transactions.
- It involves promotion of rupee in trade for import and export and then in current and capital account transactions through following activities:

- Increased use for invoicing and settlement of cross-border transactions
- Freedom for non-residents to hold financial assets/liabilities in rupee
- Freedom for non-residents to tradable balances in rupee at offshore locations.

BENEFITS OF INTERNATIONALISATION OF RUPEE

- **Reduced Forex Requirements:** It will reduce forex requirement for balance of payment stability due to reduced dependence on foreign currency for trade and also reduce the imposed cost of forex on the economy by Interest Rate Differential.
- **Reduced Vulnerability:** It will also reduce vulnerability of the economy to external shocks.
- **India's Global Stature:** It will increase India's global stature and respect something akin to China's global stature with internationalisation of **Renminbi post-2008 recession**.
- **Boost to Trade and Investment:** It can promote trade and investment by easing foreign trade and increased capital flows.
- **Lower Transaction Costs:** It can reduce the need for currency conversion, thereby lowering the transaction costs for businesses and individuals in international trade.
- **Competitive Exports:** Lower transaction costs make India more attractive for foreign investors to do business in India thereby increasing the competitiveness of India's exports.
- **Quicker Settlement Time:** Internationalisation of rupee can facilitate faster and more efficient settlement times for international transactions.
- **Mitigate Currency Risks:** It eliminates the **foreign exchange fluctuations** for Indian enterprises.
- **Diversification of Reserves:** Internationalisation would diversify India's forex reserves away from US dollars and reduce risks associated with holding a single currency.
- **Trade with Sanctioned Countries:** It would ease trade (especially oil trade) with sanctioned countries such as Iran, Russia and Venezuela and also African countries that do not have sufficient forex reserves in foreign currencies.

CHALLENGES ASSOCIATED WITH INTERNATIONALISATION OF RUPEE

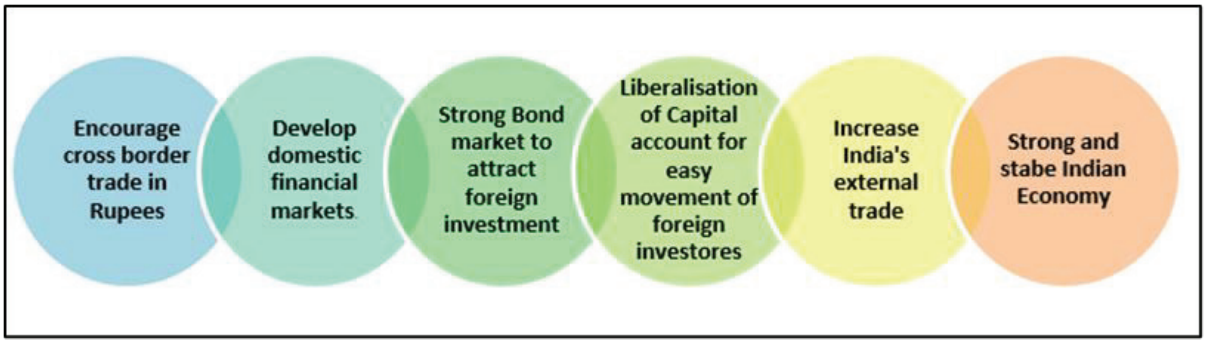
- **Capital Control Measures:** India does not allow complete capital account convertibility, which makes it difficult for rupees to be used widely in the international market.
- **Regulatory Challenges:** Internationalisation requires a supportive regulatory environment balancing free capital movement, exchange rate stability, independent monetary policy and regulatory oversight, which is difficult to achieve in complex global financial markets.
- **Limited Liquidity:** The rupee is still not widely traded in global markets which makes it difficult for investors to buy and sell rupee-denominated assets and limits its attractiveness.
- **Underdeveloped Financial Markets:** India's financial market is still developing with a limited range of products and services available for international investors.
- **Geopolitical Factors:** Geopolitical factors such as political instability, wars, sanctions etc. can have significant impact on internationalisation of rupees.
- **Increased Responsibility:** With internationalisation there would be an increased burden on India to play the role of **'Lender of Last Resort'** in order to maintain international financial and monetary system order.
- **Limited Acceptance with Neighbours:** India's trade with the neighbouring countries is also conducted in US dollars, e.g., out of around **$13 billion imported by Bangladesh** from India, **only $2 billion** is settled in rupees.

MEASURES UNDERTAKEN TO PROMOTE INTERNATIONALISATION OF RUPEE

- **Foreign Exchange Management Act, 1999:** It replaced **Foreign Exchange Regulation Act**, **1973** which has shifted the approach towards management of foreign exchange and helped in growth of India's exports and capital flows.
- **Liberalisation of Capital Account:** RBI has progressively relaxed the restrictions on capital flows to and from India, enabling greater cross-border investment and trade.
- **Offshore Rupee Markets:** RBI has allowed Indian banks to participate in the offshore non-deliverable market for rupee derivatives, which has facilitated the development of offshore rupee markets.
- **Currency Swap Agreements:** RBI has signed around **23 currency swap agreements** since **2018** with countries including UAE, Japan etc in a bid to allow exchange of rupee and foreign currency and promote internationalisation of rupees.
- **Rupee-Denominated Bonds:** The government has allowed Indian companies to issue rupee-denominated bonds, i.e. **Masala bonds** in international markets to increase demand for the rupee.

- **Bilateral Trade Agreements:** The government has signed several bilateral trade agreements with other countries (e.g. Malaysia) to facilitate greater cross-border trade and investment.
- **Special Rupee Vostro Account System:** During the **India-Russia Business Dialogue,** discussions were held for **International Trade Settlement** in **Indian Rupees** through the **Special Rupee Vostro Account System.**

OTHER REFORMS NEEDED TO PROMOTE INTERNATIONALISATION OF RUPEE



Key Terms: 5 Trillion Dollar Economy, Protectionist Policies, Export-Led Growth, Global Value Chains, Virtuous Economic Cycle, Diversification of Exports, China+1 Strategy, Foreign Financial Markets, Import Substitution, Atma-Nirbhar Bharat, Export Excellence

Previous Year Questions		
1.	How would the recent phenomena of protectionism and currency manipulations in world trade affect macroeconomic stability of India?	2018
2.	Justify the need for FDI for the development of the Indian economy. Why is there a gap between MoUs signed and actual FDIs? Suggest remedial steps to be taken for increasing actual FDIs in India.	2016
3.	There is a clear acknowledgement that Special Economic Zones (SEZs) are a tool of industrial development, manufacturing and exports. Recognising this potential, the whole instrumentality of SEZs require augmentation. Discuss the issues plaguing the success of SEZs with respect to taxation, governing laws and administration.	2015
4.	Craze for gold in Indians has led to a surge in import of gold in recent years and put pressure on balance of payments and external value of rupee. In view of this, examine the merits of the Gold Monetization Scheme.	2015
5.	Foreign Direct Investment (FDI) in the defence sector is now set to be liberalized. What influence is this expected to have on Indian defence and economy in the short and long run?	2014
6.	(a) Discuss the impact of FDI entry into the Multi-trade retail sector on supply chain management in commodity trade patterns of the economy. (b) Though India allowed Foreign Direct Investment (FDI) in what is called multi-brand retail through the joint venture route in September 2012, the FDI, even after a year, has not picked up. Discuss the reasons.	2013

9 AGRICULTURE SECTOR IN INDIA

- Agriculture is the **art and science** of **cultivating the soil, growing crops** and **raising livestock.**
- **Share of net irrigated area** accounts for about **49% of the total net sown area** in the country and about **40% is irrigated through canal systems and 60% through groundwater.** (Economic Survey 2021-2022).
- The Indian agriculture sector has been growing at an **average annual growth rate of 4.6 per cent** during the **last six years (Economic Survey 2022-23)**
- Crop burning contributed nearly 50% of the near-surface PM2.5 in Delhi in 2022.
- According to the agricultural census, **73.2% of rural women are engaged in farming activities but only 12.8% own landholdings.**
- The RBI study in 2019 said that **28% of agricultural credit is still provided by the moneylenders, traders and relatives.** When it comes to small farmers, **nearly 60% have no access to bank loans**.

Matters Related to Agriculture

- **UN SDG-1:** End Poverty in All Forms.
- **UN SDG-2:** Eliminate Global Hunger, protect indigenous seed and crop varieties, doubling agriculture productivity and small farmer incomes by 2030.

Indian Constitution

- Agriculture is a **state subject.**
- **Entry 14 of the State List:** It mentions the item relating to agriculture: "agriculture, including agricultural education and research, protection against pests and prevention of plant disease."
- **Entry 33 in the Concurrent List:** It limits the power of states in agriculture and empowers the centre by stating that both the state and the union government can legislate regarding production, trade, supply and distribution of a range of foodstuffs and agricultural raw materials.

FACTS AND DATA		
Sector Overview	• Share in GVA in the year 2022-23: 18.3 %. • Growth Rate: 3.3 per cent in 2022-23. • Share in Total Employment: 38% (2019-20). • The agriculture sector's contribution to GDP has decreased from 54% in 1950-51 to less than 15% in FY23.	
Land Use Pattern	• Net Sown Area – 43% • Pastures & Groves – 4%	• Cultivable Waste – 4% • Fallow Land – 9.6%
Food Grain Production	• Wheat and Rice accounted for around 78% of the food grains production. • Total food grains production in the country is 3296.87 Lakh tonnes in 2022-23.	

SIGNIFICANCE OF AGRICULTURE SECTOR FOR INDIA

- **Major Source of Employment**: About **60% of our labour force is directly involved in the agriculture sector**. **In terms of employment, only the fishery sector supports the livelihood of over 28 million** people in India, especially the marginalised and vulnerable communities.
- **Source of Forex Earning**: India's agricultural and processed food products exports are up by 13% to USD 19.69 billion in 2022-23. The marine products export from India is targeted to reach USD 14 billion by 2025.
- Agriculture is significant in **reducing Poverty and improving the Living Standard.**
- Agriculture helps in the **Supply of the Raw Material and Food and Development of the Industrial Sector.**
- Various **Employment Opportunities** & thus **Economic Development** is catered with the help of the Agriculture sector.
- It helps in **Controlling Inflation and Reduction in Regional Disparities.**

ISSUES IN AGRICULTURE SECTOR IN INDIA

- **Climate Change:** Out of the total net sown area s, 60% of land under cultivation is dependent on Monsoons. This condition is worsening due to climate change.
- **Faulty Implementation of Government Policies/Schemes**: for e.g., Oppressive APMC Acts, MSP-related policies, Stock limits under ECA, liberalised Agri-import policy (leading to declining in domestic prices & farmers' incomes), ineffective Insurance & credit-related schemes, lack of awareness about schemes.
- **Investment Issues:** Inadequate Public investment & private investment.
- **Inefficient MSP Structure**: Only 6% farmers get the benefit of MSP and the remaining 94% are dependent on the markets.
- **Lack of Enabling Infrastructure (Value Chain):** Including cold storage, warehouses, and agro- processing, etc.
- **Research & Development:** Less than 1% of the Agricultural GDP in India is spent on research.
- **Rural Distress & Farmer Suicides**: Nearly 4,00,000 farmers committed suicide in India between 1995 and 2018 as per NCRB 2019. This translates into approximately 48 suicides every day.
- **Agricultural NPA's**: As per the latest Financial Stability Report, March 2022, banks' gross NPA ratio for the agriculture sector was at 9.8%.

CONSEQUENCES OF AGRARIAN CRISIS

- **Reducing Farmers' Income**: Per day income of farm households is only about ₹277, which is not much different from the minimum wage rate paid under the national employment guarantee scheme (NSO, 2021).
- **Unsustainable Livelihoods**: NSSO 70th round indicates a farm household needs to have at least 1 hectare of land to cover their consumption expenditure. But over 65% of households have less than one hectare of land.
- **Rising Indebtedness**: Nearly 52% of agricultural households are under debt, esp. concentrated among small and marginal farmers (landholding < 2 ha).
- **Rural-Urban Migration**: In the last 10 years (2001-2011) India witnessed one of the largest migrations from rural to urban India due to the failure of agriculture and the dearth of employment in the agriculture sector.
- **Exit from the Agriculture sector** for better income opportunities elsewhere. According to a Centre for Study of Developing Societies (CSDS), Delhi, 76% of farmers gave up farming.
- **Rising Inequalities**: Disparity of about 3 times between a farmer and non-farmer's income.
- **Food Insecurity** and **Protests by Farmers** due to deteriorating agricultural conditions.

PRECISION FARMING

- Precision Farming (also called **Satellite Farming**) refers to the **application of a precise and proper quantity** of inputs like water, fertiliser, pesticides, etc. **at the correct time** to the crop for increasing its productivity and maximising its yields, by creating use of digital farming technologies.
- It desires implementation through ICTs, Wireless detector Networks, robotics, drones, Variable Rate Technology, Geospatial strategies, and automatic positioning systems.

BENEFITS OF PRECISION FARMING

- **Decrease use of fertiliser**
- **Reduces input price:** It reduces input prices by 18-20% and enhances yield between 30% (rice and wheat) and 100% (sugarcane, fruits, and vegetables).
- **Farm management code** like Agrivi makes all activities on the farm easier and improves farm productivity.
- **GPS soil sampling:** Testing a field's soil reveals the market nutrients, pH level, and a spread of other knowledge that is very important for creating aware and profitable selections.
- **Saves labour prices:** by exploitation technology to assist maximise the advantages of crop cultivation, crop protection, and irrigation by exploitation of automatic sensors.
- **Monitor Soil & Plant Parameters:** Growers will verify peak conditions for plant growth by placing sensors throughout the fields.
- **Correct quantity at correct time:** Applying the correct quantity of chemicals within the right place and at the correct time edges crops, soils, and groundwater, and so the complete crop cycle.
- **Prevents soil degradation**: Since over-use of chemicals is avoided, it prevents the leaching of undesired chemicals into soil.
- **Resource Efficiency:** It provides opportunities for higher resource management and afterward reduces wastage of resources.

- **Increase agriculture productivity:** Through automatic applications of nutrients and input it will help in better crop yield.
- **Efficient use of water resources:** Targeted delivery of water through techniques like fertigation reduces water usage. **Fertigation** is the process of directly applying fertiliser to a crop through the irrigation system.

CROP INSURANCE- PM FASAL BIMA YOJANA (PMFBY)

MAJOR OBJECTIVES OF PMFBY

- To provide i**nsurance coverage and financial support** to the farmers in the event of failure of any of the notified crops as a result of natural calamities, pests & diseases.
- To **stabilise the income of farmers to ensure their continuance in farming.**
- To **encourage farmers to adopt innovative and modern agricultural practices.**
- To **ensure flow of credit** to the agriculture sector.
- The new **Crop Insurance Scheme** is in line with the **One Nation – One Scheme theme.**
- The PMFBY will replace the existing two schemes **National Agricultural Insurance Scheme** as well as the **Modified NAIS.**

ZERO BUDGET NATURAL FARMING (ZBNF)

- Natural farming is a system where the laws of nature are applied to agricultural practices.
- The term Zero Budget Natural Farming (ZNBF) was coined by Subhash Palekar, it means raising crops without using any fertilisers and pesticides or any other external materials.

FEATURES OF ZBNF

It is based on **Four Pillars:**

- **Bijamrit** is the microbial coating of seeds with formulations of cow urine and cow dung.
- **Jivamrit** is the enhancement of soil microbes using an inoculum of cow dung, cow urine, and jaggery.
- **Mulching** is the covering of soil with crops or crop residues which creates humus and encourages the growth of friendly microorganisms.
- **Waaphasa** is the building up of soil humus to increase soil aeration.

- The system requires **cow dung and cow urine** obtained from Indian breed cows only. Desi cow is apparently the purest as far as the microbial content of cow dung, and urine goes.
- In ZBNF, **multi-cropping is encouraged** over single crop methods.

ORGANIC FARMING AND ZBNF

Similarities

- Both **discourage farmers from using any chemical fertilisers, pesticides on plants and in all agricultural practices.**
- Both **encourage farmers to use local breeds of seeds, and native varieties of vegetables, grains, pulses and other crops.**
- Both farming methods promote **non-chemical and homemade pest control methods.**

Differences

Organic Farming	ZBNF
Organic fertilisers and manures like compost, vermi-composting, cow dung manure, etc. are used and added to farmlands from **external sources.**	In natural farming decomposition of organic matter by microbes and earthworms is encouraged right on the soil surface itself.
It requires basic agro practices like ploughing, tilling, mixing of manures, weeding, etc. to be performed.	In natural farming, there is no ploughing, tilting, no fertilisers, and no weeding is done.
It is **still expensive** due to the requirement of bulk manures, and it has an ecological impact on surrounding environments.	Natural agriculture is an **extremely low-cost farming method,** completely moulded with local biodiversity.

INTEGRATED FARMING SYSTEMS

- This approach has **multiple objectives** of sustainability, food security, farmer's security and poverty reduction by involving livestock, vermicomposting, organic farming etc. with farming. **It ensures:**

- **Productivity**: Provides an opportunity to increase economic yield per unit area by virtue of intensification of crop and allied enterprises especially for small and marginal farmers.
- **Profitability**: It has the capability to make the sector profitable by reducing the use of chemical fertiliser and recycling nutrients.
- **Sustainability**: In IFS, by-product of one subsystem works as an input for the other subsystem, making it environmentally sustainable.
- **Recycling**: Effective recycling of products, by-products and waste material in IFS is the cornerstone behind the sustainability of farming system under resource poor condition in rural areas.
- **Income Round the Year**: Due to interaction of enterprises with crops, eggs, meat and milk.
- **Best Utilisation of Small Landholdings**: Indian farmers in many regions such as in north-eastern part, practice subsistence agriculture. They also have a rich traditional base in water harvesting, soil management etc. which could be efficiently utilised under IFS.
- **Meeting Fodder Crisis**: By-product and waste material of crop are effectively utilised as fodder for livestock.
- **Employment Generation**: Combining crop with livestock enterprises would increase the labour requirement.

INVERSE FORK-TO-FARM STRATEGY

To ensure higher prices for the farmers, the Dalwai Panel has recommended that the agricultural marketing should guide the flow of produce from farm-to-fork, through the flow of information from fork-to-farm. Hence, in a way, there is a need to focus on Inverse "Fork-to-Farm" strategy.

	FARM-TO-FORK STRATEGY	FORK-TO-FARM STRATEGY
Approach used	Production led Approach	Market led Approach
Strategy	Sale of agricultural commodities in the market to ensure remunerative prices forfarmers	Undertake cultivation of crops based upon prevailing demand.
Flow of Information	From farm to Market (Production related Information)	From Market to Farm (Demand related Information)
Integration of demand with Supply	Poor Integration	Higher Integration. Production based upon demand.
Prices received by Farmer	May be lower	Higher

Hence, Dalwai Committee has recommended adoption of inverse "Fork-to-Farm" strategy to bring about a strategic shift from production-based push into markets towards a demand-based pull. This approach focuses on reverse flow of information from markets to farmers would also enable the farmer to take informed decisions about what to market, when to market and to whom.

BENEFITS OF FORK-TO-FARM STRATEGY

- This approach focuses on reverse flow of information from markets to farmers would also enable the farmer to take informed decisions about what to market, when to market and to whom.
- The new strategy would benefit Indian agriculture in a multi-faceted manner
- Promote diversification of Indian Agriculture towards high value crops and allied sector.
- Enable Agriculture to cater to shift in consumption pattern towards protein-based
- Ensure higher prices for the farmers and reduce risk.
- Ensure both Food security as well as nutritional security.
- Prevent Inflation in Agri commodities
- Enable us to boost exports according to international demand and capture newer markets.

RECENT DEVELOPMENTS IN AGRICULTURE

A. ANIMAL HUSBANDRY INFRASTRUCTURE DEVELOPMENT FUND (AHIDF)

- In pursuance of the **Atma Nirbhar Bharat Abhiyan** stimulus package, Cabinet approved setting up of Animal Husbandry Infrastructure Development Fund (AHIDF) amounting to Rs. **15000 crores.**
- **Eligibility:** Farmer Producer Organizations (FPOs), MSMEs, Section 8 Companies, Private Companies and individual entrepreneur with only 10% margin money contribution by them.

C. GENETICALLY MODIFIED CROPS

- According to **WHO**, genetically modified crops are crops derived from organisms whose genetic material (DNA) has been modified in a way that does not occur naturally, i.e. through the introduction of a gene from a different organism.

Status of GM Crops in India

For commercial production, all GM crops in India require approval from the **Genetic Engineering Appraisal Committee (GEAC)**. Bt cotton is the only genetically modified crop that is allowed for commercial production in India.

Benefits of GM Crops	Threats from GM Crops
• Tackling food security challenges • Higher yield • Climate change resilience • Pest resistance • Tackle nutrition challenges	• **Doubtful yield increase:** The increase in yield by GM crops is still not proven. • **Terminator seeds,** which produce infertile seeds at harvest thereby increasing the dependence of farmers on seed companies. • Resistance to GM crops developed in pests • Threat to environment : it may lead to superbugs. • Health risk • International trade • Illegal cultivation • Permanent changes

Way Forward

- **Recommendations of the Parliamentary Standing Committee on Science and Technology, 2017**
- **Closed field trials:** The central government should ensure that the field trials are done in a closed environment and in consultation with agricultural universities.
- **Reforming GEAC:** GEAC should be headed by an expert from the field of Biotechnology.
- **Long-term effect:** The committee noted that no GM crop should be introduced in the country without scientific assessment of its long-term effect on the environment and human health.
- **Parliamentary Standing Committee on Agriculture, 2012**
- It recommended **labelling GM products** including food crops and processed food so that consumers are able to make informed choices.
- GEAC should be given **statutory status** to provide it power and autonomy to function as statutory regulator.
- Recommended legislation relating to **liability and redress for damage** due to Living Modified Organisms in order to comply with Nagoya-Kuala Lumpur Supplementary protocol on Biosafety.
- Recommended **strengthening of National Biodiversity Authority** with scientific, technical and legal human resources to prevent threats to biodiversity from GM crops.

BIOTECHNOLOGY IN THE AID OF AGRICULTURE

- Can **improve the productivity** of farms of small and marginal farmers.
- Can be utilised to **develop heat-tolerant, drought-resistant and early maturing varieties.**
- Increasing water-stress requires **water-use efficiency** of agriculture.
- **Develop less harmful pesticides** such as biopesticide or herbicide-tolerant, pest-resistant varieties, e.g. Bt Cotton.
- Can be effectively used to **improve productivity** of agriculture. E.g. high-yielding varieties of wheat such as DBW 187, DBW 303 etc.
- Biotechnologies such as artificial insemination, Embryo transfer, in-vitro fertilisation etc. can improve milk production and drought-resistance of the breeds. Biotechnology can **protect livestock from diseases.**

- **Fertilisers:** Biotechnology can reduce the usage of fertilisers in Indian farms and consequently ill-effect due to eutrophication. E.g. recently developed nano urea has higher uptake.
- **Bioremediation:** Biotechnology can be used to clean up contaminated soils and water bodies.
- **Post-Harvest Management:** Biotechnology can be used to develop technologies that can improve the storage and preservation of crops thereby reducing post-harvest losses, especially in horticulture crops.

AGRICULTURAL CREDIT AND INDEBTEDNESS IN INDIA

- **Over 50% of agricultural households in the country were in debt** with an average outstanding loan per household at Rs 74,121 in 2018 compared with Rs 47,000 in 2013.
- **Economic Survey (2022-23):** The average monthly income per agricultural household during the agricultural year 2018-19 was at Rs 10,218 – a 59% increase compared with Rs 6,426 in 2012-13.

Causes of High Indebtedness	Measures to Improve the Situation
• Using **Credit** for Domestic Purpose • **Inadequate access to low-cost financing** is at the root of rural misery. • The ability of rural poor households to provide assets as **collateral** is a major determinant of their access to institutional lending. • Factor of **Social Identities** • **High input costs** • **Fluctuating commodity prices**	• **Access to affordable credit** • **Agricultural Loans with Gold as Collateral** • **Restricting Farm Loan Waivers** • **Credit Guarantee Plan for Agriculture**, example Kisan Credit Card Scheme and PM Kisan Yojana. • **Increasing Credit to Allied Activities**, for example, **PM SAMPADA yojana** to promote food processing industry is a welcome step and it provides credit to associated allied sectors as well. • **Land Consolidation** • **Disparities on credit access across states.**

MAHESH KUMAR JAIN COMMITTEE ON AGRICULTURE CREDIT

The recommendations of the RBI Internal Working Group include:

- The group noted that the central and state governments need to **increase their capital expenditure** which will stimulate the demand for investment credit in agriculture.
- Banks should provide crop loans only through **Kisan Credit Cards** in order to curb the misuse of interest subsidy.
- The group **recommended that loan waivers** should be avoided.
- **Separate lending targets** should be set for allied activities and banks should not insist on land records up to Rs. 2 lakh for such credit.
- **Digitisation of land records**
- **Revising PSL:** The lending target for small and marginal farmers should be revised from the existing 8% to 10% with a roadmap of two years.
- **Indian Banks' Association** should introduce a portal on the lines of PSBLoansin59minutes to allow quicker credit access for the agriculture sector.
- Central government should set up a **credit guarantee fund** for the agriculture sector on lines of the credit guarantee fund for the MSME sector to cover the default risk of borrowers.

IRRIGATION SYSTEM

- Irrigation is the **artificial supply of water to crops** for agricultural production. There can be several artificial ways for providing water such as canals, wells, tube-wells, tanks, etc. which transport water from different sources such as rivers, ponds, or underground water to targeted fields. **"Water" is the State subject** (as per Seventh Schedule of the constitution).

MICRO-IRRIGATION SYSTEM

- **Micro-irrigation (MI) techniques** such as drip irrigation, sprinkler, rain-gun, porous pipe system, etc. where water is supplied directly to the crops are considered as innovative water-saving technology. Micro irrigation (or Localised irrigation) is a type of decentralised irrigation system.
- Micro irrigation leads to better results, but small and marginal farmers often find it unaffordable. Of the total 151.33 lakh hectares under kharif crop, only 25.72 lakh hectares is covered by micro irrigation.

Micro Irrigation Fund

- **Micro Irrigation Fund (MIF) with a corpus of Rs.5000 crore was operationalized in NABARD.**
- **The objective of the fund is to facilitate State Governments** efforts in mobilising additional resources for expanding coverage under micro irrigation and incentivizing its adoption.
- Under MIF, the State Governments are provided loans at 3% below the cost of funds; the 3% being compensated by the Govt. of India as interest subvention.

Benefits of Micro-Irrigation	Challenges of Micro-Irrigation
• **Water use efficiency and Irrigation Water Productivity** and prevents water logging. • **Energy efficiency** • **Fertigation technique**: Precise mixing of fertilisers and water, control of best dosage, and direct dosing of fertilisers to the root region resulting in the increase in fertiliser consumption by the crops. • **Increase in crop productivity** • The Mihir Shah Committee report has recommended the development of institutions for capacity building of water professionals. • **Inter-cropping** • **Infrastructure development** • **Higher yields** • **Less water loss** • **Lower consumption of fertilisers** • **Weed and disease reduction** • **Precision farming**	• **Underutilisation of Potential** • **Huge primary cost** • **Energy crisis** • Delays in subsidy payment • **Lack of Technical Support** • **Knowledge gap** • **Declining landholdings and farm income** • **Greater Maintenance requirement** • **Reducing per capita Water availability** • **Financial Returns from the Irrigation Sector** • **Problem of Drainage** • **High Usage of water** • **Inter Water Disputes** such as Mahadayi Water dispute tribunal, Godavari water state tribunals • **Skewed Irrigation Distribution** • **Inefficient usage of water**: rice and sugarcane alone consume almost 60 % of India's irrigation water.

POLICY RECOMMENDATIONS

- A **comprehensive watershed management plan** needs to be formulated and effectively implemented.
- Implementing **Vaidyanathan Committee' s Recommendations:**
  - Committee suggested the norms for fixing water rates, cost escalation on the Operation and Maintenance (O&M) component of economic water rates.
  - It suggested conversion of volumetric supply of water rates from crop-wise and area-wise water rates for different agro-climatic zones.
- **Adopting Best Practices from local level to national Level:**
  - **Jalyukta Shivar yojana in Maharashtra** has played a prominent role in providing farm ponds to every farmer in her/his agriculture field.
  - In **Gujarat, 'Bhungroo'** is a water management system that injects and stores excess rainfall water underground. This water is then used for irrigation during summers.
  - **Mission Kakatiya** is a flagship program under the **Telangana** government aimed at restoring minor irrigation sources of water like ponds and tanks.
  - **Participating with civil society:** Pani foundation hosts the Satyamev Jayate Water Cup, a competition for excellence in soil and water conservation.
  - **International Cooperation**: **Netafim**, an Israel based company, has shown the potential of a family drip irrigation system at Ramthal, **Karnataka**.

GOVERNMENT INITIATIVES

- **Jal Shakti Ministry**: created to provide access to safe drinking water by reorganising the earlier ministries.
- **National Mission on Micro Irrigation (NMMI)**: The Centrally sponsored mission was launched in June 2010 in addition to the earlier Micro Irrigation Scheme launched in January 2006.
- **Neeranchal National Watershed Project:** Improved equity, livelihoods, and incomes through forwarding linkages, on a platform of inclusiveness and local participation.

- **National Mission for Sustainable Agriculture:** Key targets for FY 2021- 2025 include covering 20 lakh hectare of area under organic farming, 87 lakh hectare under precision irrigation.

Irrigation and Water Productivity
- The Economic Survey has **proposed policy changes** which include increasing Irrigation Water Productivity (IWP) by adopting improved methods of irrigation and irrigation technologies,
- **Focus should shift from 'land productivity' to 'irrigation water productivity'**
- **Reasonable and Due Access to irrigation water to the marginal and small farmers**.

PRADHAN MANTRI KRISHI SINCHAYEE YOJANA (PMKSY)

- Launched in 2015, PMKSY has been formulated amalgamating ongoing schemes viz. Accelerated Irrigation Benefit Programme (AIBP); Integrated Watershed Management Programme (IWMP); and On-Farm Water Management (OFWM) component of National Mission on Sustainable Agriculture (NMSA).
- Recently, Government of India has approved continuation of PMKSY during 2021-22 to 2025-26, with extension of Ground Water component.

Objectives: "More Crop Per Drop"
- **Converging existing programs and schemes with ongoing projects, including integrating solar energy into irrigation operations and creating a water source for future use.**
- **Enhance the physical access** of water on the farm and expand cultivable area under assured irrigation (Har Khet ko pani).
- **Integration** of water source, **distribution** and its **efficient use**.
- **Improve on-farm water use efficiency** to reduce wastage

STORAGE OF AGRICULTURAL PRODUCE

- A study by **National Academy of Agricultural Sciences** (NAAS) said **storage is the major cause of post-harvest losses** for all kinds of food in India, fruits and vegetables, where India faces a critical deficiency of cold storage capacity—this belies the enormous potential of its processed food industry.
- Around **70%** of the total food grains production is **retained and consumed at the farm level.**
- The balance amount is supplied to the **central pool** and delivered at the nominated warehouse or at the local mandi earmarked for procurement.
- Based on the FAO Statistical Data 2021, total Food Grain Production in India is 311 MMT and total Storage Capacity in India is only 145 MMT, i.e, there is a shortage of 166 MMT of Storage
- State agencies own around **40%** of the capacity and the balance distributed among private entrepreneurs, cooperative societies, farmers, etc.

NEED FOR STORAGE AND WAREHOUSING

- **Hunger and malnutrition**: According to the 2023 Global Hunger Index (GHI) report, India ranks 111th out of 125 countries, with a score of 28.7, which indicates a serious level of hunger.
- **Low Contribution of Agriculture to GDP ie. approx. 18%.**
- **Poor income of farmers:** As per "Situation Assessment Survey" conducted in 2012-13, Monthly Agricultural Household Income was estimated as Rs.6426/- which increased to Rs.10218/- as per the survey conducted in 2018-19.
- Due to high yield seeds, irrigation facilities, etc. there is an increase in the quantity of production.
- Storage ensures **food security** (**SDG goal – 2**)
- India wastes food worth approximately $14 billion each year.
- **Paradox of Plenty** - The contrasting scenarios of record agricultural production and grinding poverty in the agriculture sector.

According to the Ministry of Consumer Affairs - In 2018-19, more than 52,13,360 kg of food grains were wasted or had rotten, causing an estimated loss of Rs 72,033,224.

- **Open Storage in mandis -** It is estimated that around 30 million tonnes of food grains are stored using open method making grains vulnerable to fungus and moisture.
- **Administrative inefficiencies** – Lack of Computerisation and poor record maintenance.
- **Hoarding**: leading to inflation and market volatility.

Warehousing in India

- **Central Warehousing Corporation (CWC):** Statutory Body since 1957, provides safe and reliable storage facilities for about 120 agricultural and industrial commodities.
- **State Warehousing Corporations (SWCs):** Separate Warehousing Corporations were also set up in different States.
- **Food Corporation of India (FCI):** They perform the important functions of ensuring scientific storage, Warehousing receipts can be used by the farmers as collateral for the access of loans, Ensures Price stabilisation e.g. Operation Greens, Market Intelligence.

FOOD CORPORATION OF INDIA (FCI)

It was established under the **Food Corporations Act of 1964,** to fulfil following objectives:

- **Effective price support operations** for safeguarding the interests of the farmers.
- **Distribution** of food grains throughout the country for Public Distribution System; and
- **Maintaining a satisfactory level of operational buffer stocks** of food grains to ensure National Food Security.

ISSUES RELATED TO PROCUREMENT AND STORAGE BY FCI

- **Open-ended Procurement:** FCI buys as many grains as the farmers can sell. It not only stretches the already overburdened godowns but also collapses the food grains market.
- **Market Distortion –** Through its policy of open ended procurement.
- **Imbalances in storage facilities:** According to the CAG report, out of the total storage space, 64% was located in the large procurement states like Punjab, Haryana, Andhra Pradesh, Uttar Pradesh, and Chhattisgarh.
- **Inadequate storage facility:** the existing storage facility is poorly maintained causing grain damages due to pest attacks.
- **Lack of scientific storage mechanism: FCI** still uses gunny bags for storing food grains instead of canisters or metal containers.
- **Poor pest management –** Modern Sanitary and Phytosanitary Measures for exports require sophistication in pest management which is absent.
- **Non-adherence to First in First out principle (FIFO):** CAG report has mentioned that food grains harvested in later dates are despatched for PDS consumption but still grains procured in earlier dates are stored in warehouses
- **Transit losses:** Around 411,810 tonnes of wheat and rice were wasted as transit and pilferage losses in the past four years.

REFORMS TAKEN TO IMPROVE STORAGE FACILITIES

- **Decentralised Procurement Scheme**: to procure and store at the state level to avoid transit losses.
- **Negotiable Warehouse Receipt system**: Under this system, farmers can deposit their produce to the registered warehouses, and get a certain amount as advance from banks against their produce valued at MSP.
- **The Essential Commodities Act 1955:** ECA has been amended to relax stocking limits and thus encourage private and foreign investments in storage.
- **Agriculture Infrastructure Fund**: Setup for investment in viable projects for post-harvest management Infrastructure.
- **Storage and cold chain facilities**: created under Pradhan Mantri Kisan Sampada Yojana (PMKSY)
- **'Village Storage Scheme' announced in Budget 2020**: Run by women's SHGs with the aim to provide holding capacity for farmers.
- **Implementing recommendations of Shanta Kumar committee:**
    - **Hand over Procurement to state:** The FCI should hand over procurement operations of wheat, paddy, and rice to states that have gained sufficient experience and infrastructure.
    - **Outsourcing:** FCI should outsource its stocking operations to various agencies such as Central

Way Forward

- **Modernization** and **up-gradation** of Bulk Grain Handling Infrastructure. Government is inviting tenders under Design, Build, Fund, Own & Operate (DBFOT) to attract private investment into food storage and handling
- The **private sector** should be encouraged to build storage capacities in which they will store and maintain food grains procured by the Government agencies. Private Entrepreneurs Guarantee (PEG) Scheme formulated in 2008 in which storage capacity is created by private parties.
- **Adequate manpower and supervision** are required for scientific and safe storage.
- **Timely and systematic evacuation planning** can lead to the utilisation of vacant storage space.

- The **intervention of state governments in identifying and handing over land** for the construction of covered storage spaces.
- **FCI reforms** should be an urgent measure to address the issue of funding and scientific storage. Need to Implement Shanta Kumar committee recommendations.
- **Increase accreditation of cold storage** for the perishable commodities.

TRANSPORT OF AGRICULTURAL PRODUCE

ISSUES WITH THE TRANSPORT OF AGRICULTURAL PRODUCE

- Lack of modern road and rail infrastructure.
- Lack of full regional connectivity especially with Northeast India.
- Seasonally blocked routes in Himalayan and North-eastern states.
- Over reliance on road transport instead of rail transport.
- Lack of all-weather and metalled roads in rural and tribal pockets of india.
- Usually transport trucks overloading leads to leakage and wastage during transit.

STEPS TO IMPROVE TRANSPORTATION

- **Kisan rails as the first-ever multi-commodity trains** to move perishable agricultural commodities.
- **Krishi Udan scheme to transport agricultural goods by air** Example India Airlifted fruits from Afghanistan (Dedicated air corridor for carrying cargo).
- **Transport and Marketing Assistance (TMA)** for specified agriculture products scheme aims to provide assistance for the international component of freight and marketing of agricultural produce which is likely to mitigate disadvantage of higher cost of transportation of export of specified agriculture products due to trans-shipment and to promote brand recognition for Indian agricultural products in the specified overseas markets.
- **Pradhan Mantri Gram Sadak Yojana**: It is a nationwide plan in India to provide good all-weather road connectivity to unconnected villages. In 2022 it was extended to connect all Gramin Agricultural Markets.
- **Dedicated freight corridor**: dedicated for agro-products. Andhra Pradesh flagged off India's first fruit train carrying locally grown bananas to JNPT.
- **Shift from road to rail network**: About 1.9% of the perishable fruits and vegetables are transported through rail, while 97.4% of the produce is transported through roads.

MARKETING OF AGRICULTURAL PRODUCE

PROBLEMS WITH AGRICULTURAL MARKETING IN INDIA

- **Licensing Barriers:** These can prevent new entrants from participating in the market, limiting competition and potentially leading to higher prices for farmers and consumers.
- **High Incidence of Market Charges**: APMCs collect market fees ranging between 0.5% to 2.0% of the sale value of the product.
- **Absence of standardised grading mechanism** of agricultural produce before it is sold.
- **Poor Infrastructure in Agricultural Markets:** This can lead to inefficiencies in the distribution of agricultural products, resulting in waste and lower prices for farmers.
- Information dissemination systems provide limited information like prices of major commodities and generally not available in local languages.
- **Absence of a National Integrated Market**: APMC performs the dual role of regulator and player.
- **Limited public investment** on the agricultural marketing sub-sector ranging from 4-5% of the total public expenses on agriculture.

Initiatives to Improve Marketing

- **Electronic national agriculture market (e-NAM)** to connect all regulated wholesale produce markets through a pan-India trading portal.
- **E-governance portal AGMARKNET** for providing comprehensive information on prices, arrivals, and quality of agricultural commodities in India.
- **Kisan Credit Card scheme**: to provide term loans for agricultural needs.
- **Formation and Promotion of FPOs** under the "One District One Product" cluster to promote specialisation and better processing, marketing, branding & export.
- **Market Intelligence and Early Warning System (MIEWS) Portal**
- **Seamless connectivity** through Kisan Rail and Dedicated freight corridors.

AGRICULTURAL PRODUCE MARKETING COMMITTEES (APMC)

- The Ministry of Agriculture and Farmers' Welfare made attempts to overhaul the regulatory system by proposing the **Model APMC Act 2003** and **Model State/UT Agricultural Produce and Livestock Marketing (Promotion & Facilitation) Act, 2017**.
- APMC is a **statutory market committee** constituted by a State Government in respect of trade in certain notified agricultural or horticultural or livestock products, under the **APMC Act** issued by that state government.
- In most APMCs, buyers have to route all purchases through licensed aadhatiyas(middlemen). These middlemen **charge a commission for their "services"** — many times, both from the buyer and seller.

Functions of APMC

- **Ensuring Transparency** in pricing system and market area.
- Providing **market-led extension services** to farmers.
- **Ensuring payment** for agricultural produce sold by farmers on the same day.
- **Promoting agricultural processing** including activities for value addition
- **Promoting public-private partnership (PPP)** in the management of agricultural markets.

MODEL AGRICULTURAL PRODUCE AND LIVESTOCK MARKETING (PROMOTION & FACILITATION) (APLM) ACT, 2017

- It aims to **replace the APMC Act, 2003** and create a **single Agri-market** where with a single licence one can trade Agri-produce as well as livestock. It causes better price realisation by Farmers thus helps in **doubling the farmer's income by 2022.**

Other Government Initiatives to improve Agricultural Marketing in India

- **AGMARKETNET**: It is a G2C e-governance portal that caters to the needs of various stakeholders such as farmers, industry, policymakers, and academic institutions by providing agricultural marketing-related information from a single window.
- **Gramin Agricultural Markets (GrAMs):** Efforts are being made to develop and upgrade the existing 22,000 rural haats (Rural Primary Markets) into GrAMs. It will be linked to e-NAM and will remain outside the APMC Act regulation.
- **Scheme for Formation and Promotion of FPOs**: The scheme aims to create 10,000 FPOs in a five year period from 2019-20 to 2023-24.
- Several states have started to give farmers direct access to consumers and eliminate the middlemen. Ex: Apni Mandi in Punjab, Haryana and Rajasthan, Hadapsar Mandi in Pune.

AGRICULTURE EXPORTS

- In the fiscal period 2022-23, India's agricultural exports reached USD 53.1 billion.
- **According to the WTO Trade Data,** India was ranked at 25th in 1986, which slipped further to 28th in 1987 and 29th position in 1988. However, the ranking of India improved significantly as the county's position moved to 10th rank in 2019 which improved further to 9th position in 2020 and 8th rank in 2021.
- Major commodities in export basket - rice (both Basmati and non-basmati), marine products, sugar, spices, cotton, wheat and buffalo meat.
- **India has emerged as the net exporter of agricultural products**, with exports in 2021-22 touching a record USD.

Significance of Agriculture Exports

- High Growth Sector and has been showing sustained positive trends.
- Contribution to India's agricultural GDP and Foreign Exchange.
- Has helped in development of "Brand India" and promotion of Organic Farming.

Challenges Faced by Indian Agricultural Exports

- Low share of high value and value-added Agri produce in its Agri export basket is less than 15% compared to 25% in the US and 49% in China.
- Agriculture exports face challenges like, poor export competitiveness, low productivity, lack of uniformity in quality, high logistics costs, lack of adequate post-harvest & transport infrastructure, absence of market information, and global market linkages, Tariff/Non-Tariff barriers, etc.
- **Global macroeconomic volatility and stringent sanitary & phyto-sanitary standards,** use of primitive agriculture technology, non-implementation of land & marketing (APMC) reforms, lack of formal credit or insurance further discourage exports.

Government Initiatives to Boost Agri-Exports

- **Safe Food Export Traceability Portal**
- **"One Lab One Assessment" Portal**
- **Monitoring Export Alerts Portal**
- **Agriculture Export Promotion Plan Scheme of APEDA**
- **National Programme for Organic Production (NPOP)**
- **National Monetisation Pipeline**
- **Agri Udaan Programme** for **mentoring Agri start-ups**
- **APEDA has suggested augmenting cargo handling facilities at airports**, ports, etc. This will reduce the waiting time.
- **Other Initiatives:** Model Contract Farming act, Model APMC Act, digitization of land records, operation Greens, Market Access Initiative (MAI) Scheme, Market Development Assistance (MDA) Scheme, and Merchandise Exports from India Scheme (MEIS).
- **International Negotiation:** India's proactive role in the WTO negotiations on trade facilitation and public stockholding.
- **Remission of Duties and Taxes on Exported Products (RoDTEP)** scheme has been operationalized for exports with effect from 01.01.2021.

FARMER PRODUCER ORGANIZATIONS (FPO)

A Producer Organisation (PO) is a **legal entity formed by primary producers** such as farmers, milk producers, fishermen, weavers, rural artisans, craftsmen, etc.

Benefits of FPOs to Small and Marginal Farmers:

- Reduced Cost of Input Procurement.
- Provide Finances at Reasonable Cost
- Minimise post-harvest losses, for e.g., **Jammu, Oriental FPO** has developed cold chain infrastructure and created the brand name **'Safe N Fresh'.**
- Collective Bargaining.
- FPOs can address Land Fragmentation Issue.
- Social Impact – Improved gender relations and decision making of women farmers. Ex: **Tribal women in the Pali district of Rajasthan** formed a producer company and they are getting higher prices for **custard apples**.

Challenges and Issues in Building Robust FPO:

- Unorganised range of activity.
- High cost of institutional credit, large dependence on informal sources for funding.
- Lack of access to modern technology and lack of forwarding linkages
- Inadequate infrastructure and delays in getting clearances.

Dalwai Committee Recommendations for Doubling Farmer Income: Top 15 Points

The Ashok Dalwai Committee, formed in 2016, made a series of recommendations aimed at doubling farmer income in India by 2022. Here are 15 of the most significant points:

1. **Improving Crop Productivity:**
   - Promote use of high-yielding crop varieties and improved agronomic practices.
   - Enhance soil health through measures like organic farming and judicious use of fertilizers.
2. **Enhancing Livestock Productivity:**
   - Encourage better breeding practices and improved animal health management.
   - Facilitate access to quality animal feed and better veterinary services.
3. **Resource Use Efficiency:**
   - Promote micro-irrigation techniques like drip irrigation and sprinkler systems to conserve water.
   - Encourage efficient use of fertilizers and pesticides.
4. **Increasing Cropping Intensity:**
   - Develop multi-cropping patterns and encourage adoption of short-duration, high-value crops.
   - Promote crop diversification to reduce risk and improve overall income.
5. **Diversification Towards High-Value Crops:**
   - Encourage cultivation of fruits, vegetables, pulses, and oilseeds with higher market returns.
   - Strengthen market linkages for these high-value crops.

6. **Improving Realization of Prices:**
   - Strengthen Farmer Producer Organizations (FPOs) to improve bargaining power and access to better markets.
   - Minimize post-harvest losses through improved storage facilities and infrastructure.
7. **Shifting from Farm to Non-Farm Activities:**
   - Promote rural entrepreneurship and skill development in allied sectors like processing, marketing, and value addition.
   - Encourage off-farm income generation activities like rural tourism and handicrafts.
8. **Investing in Agricultural Infrastructure:**
   - Improve irrigation facilities and address water scarcity issues.
   - Upgrade rural roads and storage facilities to minimize transportation costs and post-harvest losses.
9. **Strengthening Market Infrastructure:**
   - Establish efficient and transparent e-NAM (National Agriculture Market) across the country.
   - Develop a robust cold chain infrastructure for perishable agricultural products.
10. **Focus on Risk Management:**
    - Encourage crop and livestock insurance schemes to protect farmers from income fluctuations due to natural disasters.
    - Promote weather-based crop insurance for managing climate risks.
11. **Access to Credit:**
    - Simplify loan application processes and reduce interest rates for farmers.
    - Promote Kisan Credit Cards (KCC) for easy access to credit facilities.
12. **Promoting Agri-preneurship:**
    - Support establishment of agri-startups and incubators to foster innovation in the agricultural sector.
    - Encourage public-private partnerships for technology transfer and adoption of new farming techniques.
13. **Focus on Soil Health:**
    - Promote soil testing and adoption of soil health card recommendations.
    - Encourage organic farming practices and judicious use of fertilizers to improve soil fertility.
14. **Empowering Women Farmers:**
    - Provide land ownership rights and access to credit and extension services for women farmers.
    - Promote participation of women in FPOs and agricultural decision-making processes.
15. **Continuous Research and Extension:**
    - Strengthen agricultural research institutions to develop new crop varieties and farming practices.
    - Enhance extension services to disseminate knowledge and best practices to farmers effectively.

These recommendations, if implemented effectively, have the potential to significantly improve the income and livelihood of farmers in India.

TECHNOLOGY IN THE AID OF FARMERS

INTRODUCTION

- The aim of e-Agriculture is to promote the adoption and use of ICTs and digital innovations in agriculture, forestry, fisheries, natural resource management, and rural developments.
- The e-Technology can be utilised through three basic pillars, i.e. **Agri-extension & Information + Services + Research which results in digitally empowered farmers.**

Scope and Significance of Adopting E-Technology in Agriculture

- **Remedial Measures for** water crisis, desertification, crop pests, diseases and a persistent lack of infrastructure can be taken with the use of Information Technology.
- **Development of Efficient Methods with** use of Survey Drones, Fleet of Agribots, Sensor with animals, Smart tractor etc.
- **E-procurement of Crops**: The Haryana government has launched the Meri Fasal-Mera Byora e-procurement portal. Due to this portal.**Reduce Farmer Effort** and **improve decision-making by collecting and analysing granular data** and **Weather prediction**.
- Improving productivity and Environmental sustainability.

ARTIFICIAL INTELLIGENCE (AI) IN AGRICULTURE

- In 2018, the **International Crop Research Institute for Semi-Arid Tropics (ICRISAT) received a Microsoft Artificial Intelligence (AI)** for Earth grant to support the continued development of Artificial Intelligence solutions, focusing on sustainable agriculture in developing parts across the globe.
- In India, this pilot project is implemented in the state of **Andhra Pradesh** where farmers have always relied on their guesswork to decide when to plant and a combination of ancient traditions.
- AI in farming **can help in increasing crop yield by providing:**
    - real-time advisory,
    - prediction of crop prices, and
    - early detection of pest attacks, precision farming, and others.
      For example- **CROPTIX** to diagnose crop diseases in the field and alert rural farmers in Kenya and PEAT, a machine vision for diagnosing pests/soil defects.
    - Providing Logistic support **(e.g. Kisan Sabha App)**

ICT INITIATIVES FOR AGRICULTURE SECTOR

- **mKisan SMS Portal** enables all Central and State government organizations in agriculture and allied sectors to provide information, services, and advisories to farmers.
- **Kisan Call Centres (KCC)** provide a platform for farmers to get immediate assistance and information, which can help them make informed decisions about their agricultural practices.
- **eSagu** for personalised expert advice to small and marginal farmers.
- **Earik,** the single window to improve the access to agricultural information and technology in north-eastern India.
- **aAQUA** is a multilingual online problem-solving system that helps farmers get expert answers to their questions.
- **Direct benefit transfer (DBT) Central Agri Portal.**
- **Agmarknet** for daily market price and real time information about prices, location of commodities and varieties in local languages.
- **Digital Mandi** is an electronic trading platform for agri-commodities.
- **e- Choupal** is a village kiosk with a computer and internet access that is managed by an expert.
- **Akashganga for** timely milk collection, proper payment, and higher income for dairy farmers. The system includes electronic milk weighing, fat testing, software capture of unique ID, and printing of payslips and payment settlement.
- **The National Agriculture Market (NAM)**
- **The Digital Agriculture Mission (2021-2025):** The mission aims to encourage and speed up projects based on cutting-edge technologies, including AI, blockchain, remote sensing, robots, and drones.

Case Studies	
Microsoft	Started a pilot project with Hyderabad-based International Crop Research Institute for Semi-Arid Tropics (a UN agency) in 2016 to build a sowing app to conveniently provide sowing information to farmers.
Karnataka	SAMRAKSHANE, an e-governance solution to handle crop insurance under Pradhan Mantri Fasal Bima Yojana (PMFBY) and the Modified Weather Based Crop Insurance Scheme (MWBCIS).
Karnataka Government and NCDEX Spot Exchange	The Karnataka state government and the National Commodity and Derivatives Exchange (NCDEX) started Rashtriya e-Market Services to encourage competition in agricultural markets and help farmers receive better prices for their crops.
Plantix	Karnataka government launched "Plantix", an app to detect pests, plant diseases, and nutrient deficiencies.
Meghdoot	App launched by the Government to help farmers by providing forecasts relating to temperature, humidity, rainfall, wind speed and direction, etc.

Challenges in adopting E-Technology

- Duplication of efforts and yet lack of proper infrastructure.
- Absence of right inputs and advisory along with adoption inertia due to traditional attitude.
- Financial constraints.
- Lack of awareness and education.
- Electricity, Connectivity and Cellular Bandwidth.
- Cyber Security and Government's map restriction policies.

- Linguistic diversity as a barrier.

Way Forward

- Raising **digital literacy and developing more Farmer-centric Mobile Apps** and promoting research and innovations in this regard.
- **Outreach and awareness activities** with informative content and proper monitoring.
- Developing the concept of **smart villages with development of intelligence infrastructure,** adoption of **sustainable practices** and linkage of rural communities to institutional mechanisms.
- Technology adoption can help the farm product to reach from **"local to global"** market in an efficient way.
- Would help convert the image of the Indian **"Peasant farmer"** into an **"Entrepreneur farmer".**

DIRECT AND INDIRECT FARM SUBSIDIES

SUBSIDIES: DATA AND FACTS

- **Total Subsidy**: In 2023-24, the total expenditure on subsidies is estimated to be Rs 4,03,084 crore, a decrease of 28.3% from the revised estimate of 2022-23.
- **Food Subsidy:** Allocation to food subsidy is estimated at **Rs 1,97,350 crore in 2023-24, a 31.3%** decrease over the revised estimate of 2022-23. Food Subsidy includes **- Subsidy to FCI, Subsidy to States and Sugar Subsidy.**
- **Fertiliser Subsidy**: In **2023-24, Rs 1,75,103 crore** was budgeted for fertiliser subsidies **22% less than the revised estimates of 2022-23**. Fertiliser subsidies for 2022-23 have been significantly increased in response to a sharp increase in international prices of raw materials because of the Russia- Ukraine war.
- **Power Subsidy and Agriculture:** The Standing Committee on Water Resources (2022) noted that subsidised electricity encouraged farmers to grow water-intensive crops in water-scarce areas.

DIRECT FARM SUBSIDIES

- Direct farm subsidies are those subsidies that are **directly provided to farmers** and are generally paid in the form of a **direct cash subsidy**. Examples of direct farm subsidies: **PM Kisan Scheme, PAHAL in LPG, Farm Loan Waivers**.

Challenges of Direct Farm Subsidies	Advantages of Direct Farm Subsidies
• **Lack of Financial Inclusion** • **Moral hazard** • **Identification of beneficiaries** • **Inflation** • **Market Access**	• Boosting the purchasing power of farmers and giving them a choice to spend. • PM Kisan Scheme, the Rythu Bandhu Scheme provides financial assistance to farmers by allowing them the choice to spend as per their requirements in cultivation. • Prevents the misuse of public funds. • Direct subsidies also curb the inefficient use of resources. Ex: Farmers will purchase fertiliser at full rate and will purchase what is needed.
	• The cash farmers receive can be used as capital in agriculture. • Reduces government burden freeing transportation and storage costs. • Transparency: It will also curb the corruption and issue of ghost beneficiaries and will bring in transparency.

INDIRECT FARM SUBSIDIES

- Indirect subsidies are those subsidies in which the cost of the product is set at a lower price than the market price.
- Indirect subsidies are **provided in terms of tax breaks, insurance, low-interest loans, depreciation write-offs, rent rebates.**
- India spends roughly **2% of GDP** on indirect subsidies.
- **Examples:** Irrigation subsidy, Power subsidy, Fertilizer subsidy, Credit subsidy, MSP (Minimum Support Price), etc.

Challenges of Indirect Farm Subsidies	Advantages of Indirect Subsidies
• Cereal Centric supports distorted cropping patterns. • Overuse of natural resources and corruption due to intermediaries.	• Key role in promoting technological and infrastructural advancements, ensuring farmers get quality inputs like Seed and Fertilizer. • Change in behaviour and promotion of sustainable practices like crop diversification. • Farmers training and use of technology.

• International pressure to minimise subsidies and vote bank politics create a peculiar situation.	• Ensures food security in the country. • Helps to contain the migration from the agriculture sector.

SUBSIDIES LED DISTORTIONS IN INDIA

- Most state governments have failed to ensure **rational and sustainable use of subsidised water and electricity.**
- **Subsidised Fertilisers:** Use of NPK (nitrogen, phosphorus, and potassium,) is in a ratio of around **8:3:1** while recommended use is **4:2:1**.
- **Cultivation of wheat, Rice and sugarcane at cost of pulses, horticulture crops and coarse but nutritious grains.**
- **Agricultural Finance**: Farmers are entitled to pre- harvest loan at 7% interest rate. They are allowed further 3% subvention in case of timely payment. Farmers can also take loan for post-harvest time against Negotiable Warehouse Receipt.
- **Price Subsidies can distort markets in ways that ultimately hurt the poor: For Instance: Farm loan waiver** not only increases the states' fiscal deficit and interest burden, but also limits their ability to invest in productive capital in agriculture.
- **Food inflation, leakage and Corruption.**

Measures to tackle Farm Subsidies Challenges/Way Forward

- **Kelkar Committee:**
  - The committee recommended the phased elimination of subsidies on Diesel, Petrol, Cylinder gas and converting them to capital investments.
  - It also recommended the rationalisation of subsidy on Fertiliser.

MINIMUM SUPPORT PRICE (MSP)

- **Introduced in the 1960s to overcome India's food deficit,** MSP is the **minimum price that the government considers remunerative** for agricultural production and is hence deserving of support. In event of fall of prices in **notified agricultural commodities**, the government provides price support by procuring the farm produce at MSP.
- MSP is considered as one of the **most important measures to ensure Food security and alleviate rural poverty**, **procure food grains for Public distribution**, etc.

CURRENT STATUS OF MSP

- At present, MSP is declared for **23 agricultural commodities** by the government on the recommendation of **Commission for Agricultural Costs and Prices (CACP)** before cropping season, apart from this Fair and Remunerative Price for sugarcane is also declared.
- Currently, MSP is declared for **23 agricultural commodities**
- **7 cereals** (paddy, wheat, maize, bajra, jowar, ragi and barley)
- **5 pulses** (chana, arhar/tur, urad, moong and masoor)
- **7 oilseeds** (rapeseed-mustard, groundnut, soyabean, sunflower, sesamum, safflower and niger seed)
- **4 commercial crops** (cotton, sugarcane, Copra (Milling and Ball) and raw jute).
- Government is **not legally bound to pay MSP** even if the market rates are below the threshold prices. MSP is run entirely on executive directions and isn't guaranteed by law.

M S Swaminathan Committee's Recommendation on MSP

- Recommended MSP should be at least 50% more than the weighted average cost of production.
- Arrangements for MSP need to be put in place for crops other than paddy and wheat. Also, millets and other nutritious cereals should be permanently included in the PDS.

IMPORTANCE AND BENEFITS OF MSP REGIME

- Safety net or insurance and higher investments in agriculture and adoption of technology.
- **Protection from fluctuation in global markets and food security** is achieved.
- **Alleviation of Rural poverty prevents rural to urban migration** for jobs.
- Ensures **remunerative income** and helps to make **informed decisions**.
- **Acts as a benchmark for private buyers** and **counters price volatility of agricultural commodities.**
- Improve economic access of food to people **(through procurement and distribution).**
- **Crop Diversification**: There are slightly higher increases in the MSP for pulses, oilseeds and coarse cereals which helps in achieving the motive of diversifying crops.

- **Forward Chain**: The MSP leads to higher farm profits which encourage farmers to spend more on inputs, technology etc.
- **Atma-nirbhar Bharat**: **The government has focussed on increase in production per acre to fulfil the objective of Atma-Nirbhar Bharat.** For instance -MSP for lentils (Masur) and mustard increased by 9% (Rs 500 per quintal) and 8% (Rs 400 per quintal) to encourage farmers to go for more production of pulses.

IMPACT OF MSP ON CROPPING PATTERN

- MSP backed procurement of Wheat and Rice, especially from Punjab and Haryana has promoted rice/wheat monoculture despite lack of favourable conditions.
- Traditionally, the mainstay of Indian agriculture, millets (especially Jowar and Bajra) saw a decline.
- Heavy FRP **(Fair and Remunerative Price)** and SAP **(State Administered Price)** regime is one of the prime reasons for sugarcane cultivation in UP, Maharashtra and Bihar.
- Inadequate MSP protection and low procurement has led to shrinkage of area of cultivation in pulses and oilseeds and resorting to imports in times of scarcity.

Fair and Remunerative Price (FRP)

- It is the minimum price at which sugarcane is to be purchased by sugar mills from farmers. It is fixed by the Cabinet Committee on Economic Affairs (CCEA)) on the basis of recommendations from the Commission for Agricultural Costs and Prices (CACP) every year before cropping seasons.
- Average annual production of sugarcane is around 35.5 crore tonnes (As per Economic Survey 2021-22), which is used to produce around 3 crore tonnes of sugar.
- India has emerged as the world's largest producer and consumer of sugar as well as the world's 2nd largest exporter of sugar.

CHALLENGES ASSOCIATED WITH MSP REGIME

- **Distortion of Cropping Patterns and Environmental Impact:** The MSP regime often distorts cropping patterns, leading to adverse environmental effects. For instance, the cultivation of water-intensive crops like rice in semi-arid regions such as Punjab and Haryana has resulted in groundwater depletion and soil degradation.
- **Low Agricultural Yield:** Despite the MSP system, India's yield per hectare remains among the lowest compared to other large agricultural economies.
- **Inflation and Competition:** The MSP regime can contribute to inflation and is detrimental to market competition, potentially leading to inefficiencies in the agricultural sector.
- **Sugar Industry Challenges:** State governments arbitrarily fixing cane prices above the MSP set by the Centre adversely affects sugar mills, leading to their inability to pay farmers' dues.
- **Agricultural Ecosystem Degradation:** Growing crops that are not suited to the agro-climatic conditions leads to the depletion of water tables, soil degradation, and poor water quality. For example, the widespread cultivation of rice in unsuitable regions like Punjab and Haryana has deteriorated the groundwater table and contributed to stubble burning issues.
- **Awareness and Accessibility Issues:** There is low awareness and accessibility to the MSP system, resulting in regional imbalances and inequities.
- **Payment Delays and Market Distortions:** Delays in payments under the MSP system contribute to debt obligations for farmers and distort market dynamics.
- **Curbed Agricultural Exports:** High MSP prices make Indian agricultural exports less competitive in international markets.

Way Forward

- **Recommendations of NITI Aayog:**
  - Improved facilities at procurement centres, such as drying yards, weighing bridges, toilets, etc.
  - More godowns should be set up and maintained properly for better storage and reduction of wastage.
  - The Procurement Centres should be in the village itself to avoid transportation costs.
  - The MSP scheme requires a complete overhaul in those States where the impact of the scheme is 'nil'.
- **Recommendation of National Farmers Commission**
  - **Improvement in implementation of Minimum Support Price (MSP):** MSP arrangements must be made for crops other than paddy and wheat. Millets and other nutritious cereals should also be included in the PDS permanently.
  - **Minimum capping on MSP:** MSP should be at least 50% more than the weighted average cost of production.

- **DBT Payment issues** due to non-linking of bank accounts with Aadhar or financial exclusion (not having a bank account).
- **Price Difference** covered by the Government must be capped (10% recommended by NITI Aayog) to discourage cartelisation.
- **Reasonable due diligence** to ensure Aadhar- Bank account linkage.
- **Direct Income Support schemes** (e.g. PM KISAN) and **Price Insurance Scheme** must be considered as a non-trade distorting alternative to PDPS.

Alternatives to MSP

- Madhya Pradesh had previously experimented with the system by implementing "Bhavantar Bhugtan Yojana", and Haryana is currently in the process of implementing it for certain commodities.
- While recent steps in the agriculture sector such as PM KISAN and quasi-rural basic income schemes like Telengana's Rythu Bandhu scheme are a good step, MSP reforms are a sine-qua-non for our goal to double farmer's income.

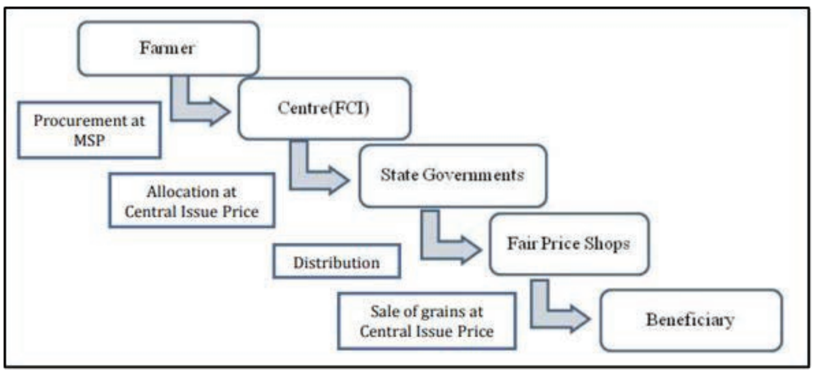
COMMITTEE RECOMMENDATIONS

National Commission on Farmers - Swaminathan Committee (2004):

- **MSP is insurance not remuneration**
- **Distinguishing between support prices and procurement prices.**
- Distribute ceiling-surplus and waste land.
- **Prevent diversion** of prime agricultural land and forests.
- MSPs **must be at least 50% more than the cost of production**.
- **Negotiable Warehouse Receipt Scheme** must be started and scaled where farmers can get 80% advance from banks against their produce valued at MSP to avoid distress sale at times of low prevailing prices.
- **Shifting focus of MSP on Pulses and Oilseeds** and realign trade policy for better synergy.
- **Outsource stocking operations to agencies such as Central Warehousing Corporation,** State Warehousing corporations and Private Sector.
- **Buffer Stocking Operations and Automatic Liquidation Policy**.
- **End to End Computerisation** of the entire food management system.

PUBLIC DISTRIBUTION SYSTEM (PDS)

Public distribution system is a **government-sponsored chain of fair price shops** entrusted with the work of distributing basic food and non-food commodities to the targeted section of people. The PDS system is managed by the **Ministry of Consumer Affairs, Food and Public Distribution**.



Objective of PDS

- Implementation of NFSA.
- To have a moderating influence on the market.
- To attempt socialisation in the matter of distribution of essential commodities
- Correct the current supply and demand imbalances for consumer products
- Ensure social justice
- Support poverty-relief programmes
- Meeting demand and supply
- Improvement in the Public Service System
- **Nutritional security**: PDS has an objective to provide a regular **supply of nutritious food to beneficiaries.**

Issues Associated with PDS in India

- Identification of beneficiaries and issues with Aadhar Validation
- Shortfall in storage capacity with FCI against the central pool stock
- Inconsistent quality and Environmental issues
- Dual pricing , Corruption and leakages

- Rising Subsidy and financial burden and concerns regarding the financial feasibility of such a system

Shanta Kumar Committee Recommendations on PDS Reforms:

- **End-to-End Computerization:** Prioritize computerization and transparency. Delay NFSA implementation in states lacking:
  - End-to-end computerization
  - Online beneficiary lists
  - Vigilance committees for PDS shops
- **Coverage and Targeting:**
  - Reduce coverage from 67% to 40%, focusing on BPL families.
- **Foodgrain Quantity:** Increase grain allocation from 5kg to 7kg per person.
- **Pricing:**
  - Maintain subsidized pricing for Antyodaya households.
  - Link priority household pricing to MSP (around 50% of MSP).
- **Distribution and Timing:**
  - Provide 6 months' ration to beneficiaries after procurement season.
  - Reduce storage costs and consumer hassles.
- **Cash Transfers:**
  - Gradually introduce cash transfers.
- **Storage and Transportation:**
  - Outsource storage to agencies like CWC and SWC.
  - Phase out CAP storage.
  - Containerize grain movement to minimize losses.
- **Buffer Stocks:**
  - Implement a buffer stock liquidation policy with flexibility for:
    - Exports
    - Selling surplus in the market

FOOD SECURITY

INTRODUCTION

- The Food and Agricultural Organization (FAO) states that food security emerges **when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.** Food security has three important and closely related components, which are :
- Availability of food, Access to food, Absorption of food.

NEED OF FOOD SECURITY IN INDIA

- **Chronic undernutrition:** As per the report of **'State of Food Security and Nutrition** in the **World 2022',** the number of **undernourished people in India declined to 224.3 million in 2019–21** from **247.8 million in 2004-06.**
- **Low Agriculture productivity and Cereal yield.**
- The composition of the food basket is shifting away from cereals to high value agricultural commodities like fish, eggs, milk and meat.

ISSUES RELATED TO FOOD SECURITY

- Corruption and replacement food grains, Bogus ration cards and identification issue, Nutritional security and Rural-urban bias, Uneven distribution of food grains production, procurement and distribution, Skewed production of food grains, Declining food grains production

GOVERNMENT MEASURES

Food Security: National Food Security Act (NFSA), 2013

- The basic concept of food security globally is to ensure that all people, at all times, should get access to the basic food for their active and healthy life and is characterised by availability, access, utilisation and stability of food.
- **Objective**: The Act provides for food and nutritional security in the human life cycle approach, by ensuring access to an adequate quantity of quality food at affordable prices for people to live a life with dignity and for matters connected therewith or incidental thereto.

- **Eligibility:**
  - Priority Households to be covered under TPDS, according to guidelines by the State government.
  - Households covered under existing Antodaya Anna Yojana.

PRESENT STATUS OF NFSA, 2013

- The government recently announced that all 81 million beneficiaries covered by the National Food Security Act (NFSA) will receive free food grains until December 2023.
- Beneficiaries of the Antyoday Anna Yojana (AAY) will receive 35kg of foodgrains for free each month until December 2023, while others will receive 5kg.
- The government has now discontinued the Pradhan Mantri Garib Kalyan Anna Yojana, which was launched in 2020 during Covid-19 and provided 5 kg of free food grains to every person in addition to the NFSA entitlement of 5 kg of foodgrains at subsidised rates.

REVISING NATIONAL FOOD SECURITY ACT, 2013: NITI AAYOG

- Through a discussion paper in **March 2021**, **NITI Aayog** has recommended reducing the **rural and urban coverage** under the **National Food Security Act (NFSA), 2013**, to **60%** and **40%,** respectively.
- It has also proposed a revision of beneficiaries as per the latest population which is currently being done through Census 2011.
- If the **rural-urban coverage ratio remains the same** (67% of all population), then the total number of people covered will increase from the existing **81.35 crore to 89.52 crore** - an **increase of 8.17 crore** (based on the projected 2020 population). This will **result in an additional subsidy requirement of Rs. 14,800 crore.**
- If the **national coverage ratio is revised downward,** the Centre can **save up to Rs. 47,229 crore.**
- This amount of **savings can be utilised by the Government in other important areas of concern** such as health and education.

OTHER RECOMMENDATIONS

- **High Level Committee under Shanta Kumar** had recommended **reducing the coverage** ratio from **67% of the population to 40%.**
- **Economic Survey- 2020-21:** had recommended a **revision of the Central Issue Prices (CIP)** of foodgrains released from the central pool, which have remained unchanged for the past several years.

> - The Central Issue Prices (CIP) is the price at which the government makes available food grains from the central pool to beneficiaries of the National Food Security Act of 2013 and for beneficiaries of other welfare schemes in the states from the central pool quota.

ECONOMICS OF ANIMAL REARING

- The livestock plays an important role in the economy of farmers.
- The farmers in India maintain a **mixed farming system** i.e., a combination of crop and livestock where the output of one enterprise becomes the input of another enterprise thereby realising resource efficiency.

POTENTIAL OF ANIMAL REARING ECONOMY IN INDIA: 20TH LIVESTOCK CENSUS

- Livestock contributed **16% of small farm households' income,** as well as an average of 14% for all rural households.
- It provides a **living for two-thirds of the rural population** and employs **approximately 8.8% of India's population**.
- The contribution of livestock in total agriculture and allied sector GVA (at constant prices) has increased from 24.32per cent (2014-15) to 30.13per cent (2020-21). Livestock sector contributed 4.90per cent of total GVA in 2020-21.

IMPORTANCE OF ANIMAL REARING

- **Alternative Income to farmers complementing agricultural income**
- **Employment generation**: It provides employment to around 8.8% of the Indian population. It also contributes to India's GDP. The livestock sector contributes 4.11% to Indian GDP and also 25.6% to agricultural GDP.
- **Food and Nutrition:** Combats malnutrition and hidden hunger
- Animal waste used as fertiliser.
- Resilience to climate change and Weed control.
- **Foreign Earning** from production and export of wool, leather, saddlery & harness, etc.
- **Biogas production** and **sustainable agricultural development.**

- **Women Empowerment** at the household level.
- **Risk mitigation** by providing a **sense of security and confidence** to landless, small, and marginal farmers.
- **Associated with Culture and Tradition: Use of Livestock for Sports and Recreation**

CHALLENGES IN THE LIVESTOCK DEVELOPMENT

- Yield and productivity challenge.
- Outbreak of Diseases.
- Feed availability and quality.
- **Funding Issue** and **lack of** access **and use technology**
- **Market Access** and **presence of a large informal sector.**
- Lack of quality checking and standardisation of animal products.
- **Inadequate and poor quality of veterinary infrastructure**: Testing and treatment facilities for veterinary diseases was woefully lacking in India.
- **Climate change impacts.** eg Increased heat stress can cause mass animal mortality during heatwaves, lower quantity and quality of products like milk, greater vulnerability to conditions like lameness, and even impaired reproduction.

MEASURES TO PROMOTE LIVESTOCK SECTOR

- Ensuring feed and fodder security by enhanced fodder seed production.
- **Efficient Marketing** for promotion of various livestock products like egg, fish, milk etc.
  - National Programme for Dairy Development
- **Promoting indigenous Breeds**
  - **Rashtriya Gokul Mission**
  - **Gopal Ratna Awards and Kamdhenu Awards**
  - **National Cattle and Buffalo Breeding Project**
- **Veterinary Services:**
  - **Pashu Sanjivani:** An Animal Wellness Programme encompassing provision of Animal Health cards ('Nakul Swasthya Patra') along with UID identification
- **Research and development** to increase per livestock productivity.
  - **National Artificial Insemination Programme** to prevent the spread of diseases.
- **Promoting Cattle Health**: The Government of India aimed to achieve 100 per cent vaccination for Foot-and-mouth disease under the National Animal Disease Control Programme by 2025.
- **Encouraging Public - Private Partnership (PPP)** for sustainable livestock rearing.
- **NITI AAYOG has suggested that:**
  - **Breeding indigenous cattle** with exotic breeds to enhance productivity.
  - **Capacity building** for farmers and fish breeders with new technology penetration.
  - **Promoting and developing Bull mother farms** with an objective to produce good quality genetically superior bulls and also to promote cross-breeding.
- **Connecting market of livestock**: **E-Pashu Haat Portal**: aims to connect breeders and farmers regarding availability of bovine germplasm. The portal has been launched under the scheme "National Mission on Bovine Productivity."
- **Leverage Private investment**: **Animal Husbandry Infrastructure Development Fund (AHIDF)** is proposed with 15,000 crores to leverage private investment and ensure availability of capital to the farmers.

FISHERIES- BLUE REVOLUTION

Potential	• India has become the **3rd largest fish producer** and the **4th largest exporter** of **fish** and fisheries products taking Brand India from **'Local to Global'.** • **Around 28 million** people are **employed** in the **fisheries sector** in India. • National Fish Production for year 2022-23 is expected to touch or exceed 174 lakh tons which shows a 81% increase when compared to 2013-14. • **By 2024–2025**, the government has set a target to boost fish production nationwide to **22 million metric tonnes**.
Important Committee	• **Meena Kumari Committee:** for review of deep-sea fishing policy. • **Ashok Dalwai Committee:** to chart out policy for doubling farmer's income.

Objectives	• Modernisation, employment generation and promotion of exports. • Promotion of Inclusive growth and sustainably increasing food production.
Challenges	• **Under usage of both fresh and brackish water resources** for aquaculture. • **Shortage** of quality and healthy fish **seeds**. • Lack of **mapping of zones of fishes** and poor fishing vehicles. • Absence of **standardisation and branding of fishes.** • Non-availability of **skilled and trained** man force. • Usage of **obsolete technology, depletion of inland natural** waters. • Usage of **unsustainable practices like blast fishing.** • **Lack of strong value chain** which hampers India's exports. • **Bottom trawling:** The Sri Lankan government has passed a legislation for banning trawling. Trawlers also damage the ecosystem. This has impacted badly to fishers of Tamil Nādu who are caught frequently by the Sri Lankan navy.
Measures to boost the Blue revolution	• Promoting **community participation** by establishing FPO's. • Development of **post-harvest infrastructure.** • Restoration of productivity and **conservation of indigenous fishery resources.** • **Promotion of integrated farming system- rice cum fish agriculture** on the lines of Kuttanad below sea level farming. • Upgradation of fishing vessels and using satellite technology **of GAGAN and Gemini to** map fishes rich zones.
Policy Interventions	• **Integrated development and managemen**t of the fisheries sector • Pradhan Mantri Matsya Sampada Yojana launched by the Government of India in September 2020. • **National Policy on Marine Fisheries (2020)** to develop an ecologically healthy, economically viable and socially inclusive fisheries sector. • The National Fisheries Development Board (NFDB) was established in 2006. • Establishment of **Fisheries and Aquaculture Infrastructure Development Fund (FIDF)** during 2018-19. • Extension **of Kisan Credit Card (KCC) facilities** to fishers and fish farmers to help them in meeting their working capital needs. • **MGNREGA**: For developing the farm ponds, where pisciculture is taking place.

SECOND GREEN REVOLUTION FOR SUSTAINABLE LIVELIHOODS

It is needed on account of the following reasons:

- **Growing population:** According to the United Nations Population Fund's "State of the World Population Report 2023," India's population with 1,428.6 million people, is predicted to surpass China by the middle of 2023.
- **Dependency on agriculture:** As per Annual Reports of Department of Agriculture, released in 2021, 65% of the country's population lived in the rural areas and 47% of the population was dependent on agriculture for livelihood.
- **Ecological cost:** The Green Revolution has made us self-sufficient in food grains, but the environmental consequences and ecological costs are offsetting the progress made.
- **Depletion and pollution of groundwater:** The lakes and ponds are becoming life less due to eutrophication – a direct consequence of the Green Revolution.
- **Stagnant growth:** Growth in the agricultural sector has been almost stagnant.
- **Global warming:** It is said to engulf productive coastal lands due to rise in sea levels. This creates an urgent need to raise agricultural productivity.

BRINGING GREEN REVOLUTION IN EASTERN INDIA (BGREI)

- **Objective:** BGREI is about bringing similar benefits to eastern India that largely remained untouched by the wonder that converted the north-west into a 'grain bowl'.
- **BGREI is the flagship programme** under **Rashtriya Krishi Vikas Yojana (RKVY).**
- **Focus:** Bringing the second Green Revolution in the eastern region, which has rich water resources. Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, West Bengal and eastern Uttar Pradesh (Purvanchal) are the seven states.

Evergreen Revolution

- It was invented by **Dr. M. S. Swaminathan** to address the shortcomings and gaps in the Green Revolution. It focuses on producing more with less, such as less land, less pesticide, and less water, and to achieve sustainable agriculture.

Key Terms:
Fragmented Land Holdings, Rural Distress, Doubling Farmers Income, Minimum Support Price to Minimum Reserve Price, Digital Land Record Modernisation, Farmer Producer Organization, Precision Agriculture, Integrated Farming, Resource Efficiency, Fertigation, Zero Budget Natural Farming, Water Budgeting, Paradox of Plenty, Vocal for Local, Geographical Indication, e-Agriculture, Bottom trawling, Local to Global, Food Security, Buffer Stock.

Previous Year Questions		
1.	Explain the changes in cropping pattern in India in the context of changes in consumption pattern and marketing conditions.	2023
2.	What are the major challenges of the Public Distribution System (PDS) in India? How can it be made effective and transparent?	2022
3.	What are the main bottlenecks in the upstream and downstream process of marketing of agricultural products in India?	2022
4.	What is an Integrated Farming System? How is it helpful to small and marginal farmers in India?	2022
5.	How and to what extent would micro-irrigation help in solving India's water crisis?	2021
6.	What are the salient features of the National Food Security Act, 2013? How has the Food Security Bill helped in eliminating hunger and malnutrition in India?	2021
7.	What are the present challenges before crop diversification? How do emerging technologies provide an opportunity for crop diversification?	2021
8.	What are the main constraints in transport and marketing of agricultural produce in India?	2020
9.	What are the salient features of the Jal Shakti Abhiyan launched by the Government of India for water conservation and water security?	2020
10.	What are the major factors responsible for making the rice-wheat system a success? In spite of this success, how has this system become bane in India?	2020
11.	What are the reformative steps taken by the Government to make the food grain distribution system more effective?	2019
12.	What are the reasons for poor acceptance of cost-effective small processing units? How will the food processing unit be helpful to uplift the socio-economic status of poor farmers?	2017
13.	How can the 'Digital India' programme help farmers to improve farm productivity and income? What steps has the Government taken in this regard?	2015
14.	In what way could replacement of price subsidy with Direct Benefit Transfer (DBT) change the scenario of subsidies in India? Discuss	2015
15.	The Food Security Bill is expected to eliminate hunger and malnutrition in India. Critically discuss various apprehensions in its effective implementation along with the concerns it has generated in WTO.	2013

10 Food Processing And Related Industry

INTRODUCTION

- **Definition:** Food Processing includes the process of value addition to produce products through methods such as preservation, addition of food additives, drying etc. with a view to preserve food substances in an effective manner, enhance their shelf life and quality.
- **Ministry of Food Processing Industries (MOFPI):** Formed in **1988**, the Ministry is the nodal agency for FPI and is concerned with formulation and implementation of the policies & plans for the food processing industries within the overall national priorities and objectives.
- **Department of Animal Husbandry, Dairying & Fisheries**: The Department is responsible for matters relating to livestock production, preservation, and protection from disease and improvement of stocks and dairy development. It also looks after all matters pertaining to fishing and fisheries, inland and marine.

Facts & Figures
Status of Food Processing in India (FPI): • India's food production industry worth over **$400 billion**, but food processing significantly low-as per **FICCI Report** • India is the **world's second largest producer** of **fruits & vegetables after China** but hardly 2% of the produce is processed. • In spite of a large production base, the level of processing is low. Approximately 2% of fruits and vegetables, **8% marine, 35% milk, 6% poultry** are processed.

KEY DRIVERS OF INDIA'S FOOD PROCESSING SECTOR:

- **Second Largest Producer of Fruits & Vegetables:** India is a global leader in fruit and vegetable production, ranking second only to China.
- **Major Player in Marine Products & Meat/Poultry:** India boasts the second-largest production of marine products, meat, and poultry, signifying a strong presence in these sectors.
- **World's Largest Milk Producer:** Milk production has increased by 51.05% over the past 8 years from 146.3 million tonnes during 2014-15 to 221.06 million tonnes during 2021-22.
- **Largest Livestock Population:** India's livestock population is the world's largest, with over 512 million animals. This includes a significant dairy industry with 119 million milch animals.
- **Significant Contributor to GDP:** The agriculture sector makes a substantial contribution to India's economy, accounting for roughly 25% of the country's farm Gross Domestic Product (GDP).

SIGNIFICANCE OF FOOD PROCESSING INDUSTRY (FPI)

- **Sunrise Industry:** Food Processing Industry (FPI) is one of the **sun-rise industries** in India which is of enormous significance. It provides **vital linkages between the two pillars** of the **economy**, i.e. **agriculture and industry**.
- **Employment Generation**: The development of food processing industries would generate employment opportunities, especially in rural areas where agriculture is a primary occupation. It can provide income diversification, improve livelihoods, and contribute to poverty alleviation. Though **70% of the food processing industry** is in the **unorganized** sector, it contributes **only 15% in terms of value.**
- **Demographic Dividend**: FPI is perhaps the best bet to seize the opportunity of demographic dividend. It can narrow the gap between rural and urban India.
- **Curbing Migration**: Provides employment in rural areas, hence reduces migration from rural to urban areas.
- **Increasing Farmers Income:** Food processing increases agricultural income by adding value to raw agricultural products, extending their shelf life, creating new market opportunities, and generating higher profits for farmers.
- **Reduces Food Wastage:** In India, around **25-35% food is wasted** due to inadequate **handling, storage and logistical issues**. **Only 6% of perishable food** is processed at the moment.
- **Curbing Food Inflation**: Processing **increases the shelf life** of the food thus keeping supplies in tune with the demand thereby controlling food-inflation. For e.g. **Frozen Safal Peas** are available throughout the year.

- **Nutritional Value:** Food processing techniques such as fortification and enrichment can enhance the nutritional content of food products. Essential vitamins, minerals, and other nutrients can be added to processed foods to address specific nutritional deficiencies in populations and improve overall public health.
- **Crop-Diversification**: Food processing will require different types of inputs thus creating an incentive for the farmer to grow and diversify crops. This also helps in enhancing soil fertility hence, improving overall **agricultural productivity and sustainability**.
- **Forward-Backward Linkages:** Food processing increases both **forward and backward linkages** in the **agricultural value chain**. It creates business-farmer linkages by providing a market for farmers' produce and supplies raw materials for processing.

SCOPE OF FOOD PROCESSING

- **India's Agricultural Prowess Extends Beyond Specific Crops:** As India, ranks second in the production of essential commodities like rice, wheat, potato, sugarcane, cashew nuts, and tea. This highlights the country's capability to contribute significantly to global food supplies.
- **Increasing Opportunities For Allied Sector**: There is great opportunity for fruits & vegetables processing, fisheries, milk & milk products, meat & poultry, packaged/convenience foods, alcoholic beverages & soft drinks.
- **Resource Rich India**: India is the world's second largest producer of food next to China, and has the potential of being the biggest with the food and agricultural sector.
- **Global Rankings:** India's agricultural sector is competitive on a global scale. The country consistently ranks among the top five nations in the production of coffee, tobacco, spices, and seeds. This diversified production base provides opportunities for India to cater to various international markets.
- **Potential as a Leading Supplier:** Given its significant raw material base and competitive advantage in various food commodities, India has the potential to emerge as a leading supplier of food items worldwide. This can help meet the increasing global demand for quality agricultural products.
- **Growing Urbanization**: According to the **Census 2011**, the total urban population constitutes 31.16% of the population – exemplifying increased disposable incomes, changing lifestyles and rising demands for processed food.
- **Growing Market:** India's food market is rated fifth in production, consumption, and export while accounting for **70% of global sales** and placing **sixth** overall.

CONSTRAINTS AND ISSUE IN DEVELOPMENT OF FOOD PROCESSING INDUSTRIES IN INDIA

- **Supply and Demand Side Obstacles:** This problem arises because of small and dispersed marketable surplus due to fragmented holdings, low farm productivity due to lack of mechanization, high seasonality etc.
- **Low Value-added in Processing:** There is major fragmentation of food processing capacity, with a large unorganized segment and widespread use of primitive processing. This results in lower value-addition at the processing stage, especially from a nutritional point of view.
- **Limited Ability to Control Quality and Safety:** The sheer number of players, especially in the large unorganized segment, involved in the food value-chain, makes implementation of quality and safety norms difficult.
- **Lack of Regulatory Environment:** There are numerous laws related to food processing. Different laws come under the jurisdiction of different ministries and departments which leads to delay in various legislative and administrative matters.
- **Infrastructure Related Constraints:** Absence of efficient food supply chain mechanics disrupts backward and forward linkages hampering industry's operation.
- **Regional Disparity:** The uneven geographic distribution of cold storage infrastructure also contributes to regional level disparities.
- **High Requirement of Working Capital:** Limited access to advanced and accurate instruments, insufficient automation hinder the food processing industry.

SOLUTIONS/MEASURE NEEDED FOR THE DEVELOPMENT OF FOOD PROCESSING INDUSTRIES

- **Promoting Village-Level Procurement**: The **NITI Aayog**, in the **Strategy for New India @75 document**, recommended village-level procurement centers for perishables such as fruits, vegetables and dairy.
- **Public Investment and Connectivity**: Public investment should be increased in infrastructure development and connectivity, such as building modern processing facilities and transportation networks to enhance efficiency and accessibility throughout the supply chain and ensure minimum wastage of the food products.
- **Human Resource Development**: According to the **National Skill Development Corporation (NSDC),** approximately **17.8 million individuals need to acquire the necessary skills** for the **food processing industry** by **2022**.

- **Encouraging Research & Development (R&D)**: R&D is essential in the food processing industry as it drives **innovation**, improves **product quality**, enhances **food safety measures**, increases efficiency, and develops new technologies to meet changing consumer demands.
- **Second Green Revolution and Rainbow Revolution:** These have promoted food processing industries by introducing **high-yielding crop varieties** and improved farming techniques, which increased **agricultural productivity** and provided a larger raw material base for food processing.
- **Streamlining the Regulatory Structure**: To ensure scale and economic viability, it's important to develop backward linkages through supportive regulations for **contract** and **corporate farming**, **commodity clusters**, **and intensive livestock rearing.**
- **Public Private Partnership (PPP):** The PPP in food processing industries encourages collaboration between government and private entities to invest in infrastructure, technology, and resources, leading to growth and development in the sector.

GOVERNMENT INITIATIVE TO PROMOTE FOOD PROCESSING SECTOR

- **Pradhan Mantri Kisan SAMPADA Yojana (PMKSY):** The objective of PMKSY is to supplement agriculture, modernise processing and decrease agri-waste. The following schemes will be implemented under PM Kisan SAMPADA Yojana:
  - Mega Food Parks;
  - Integrated Cold Chain and Value Addition Infrastructure;
  - Creation/ Expansion of Food Processing/ Preservation Capacities (Unit Scheme);
  - Infrastructure for Agro-processing Clusters;
  - Creation of Backward and Forward Linkages;
  - Food Safety and Quality Assurance Infrastructure;
  - Human Resources and Institutions; Operation Greens.
- **Matsya Sampada Yojana:** It is a flagship scheme for focused and sustainable development of the fisheries sector in the country.
- **Production Linked Incentive Scheme for Food Processing Industry (PLISFPI):** To support creation of **global food manufacturing champions** commensurate with India's natural resource endowment and support Indian brands of food products in the international markets with an outlay of **Rs.10900 crore**.
- **Prime Minister-Formalisation of Micro Food Processing Enterprises (PM-FME) Scheme:** It is aimed at promoting **'vocal for local'** in the sector, under the **Atmanirbhar Bharat Abhiyan**, launched in June **2020**, to support **2 lakh micro food processing units** with **credit linked subsidy with a total outlay of Rs. 10,000 crores** over the **period 2020-2025**. Other features of the scheme are:
  - **Seed Capital for SHGs:** Seed capital @ Rs. 40,000/- per member of SHG for working capital and purchase of small tools maximum upto 4 Lakhs per SHG.
  - **One District One Product (ODOP):** The States would identify the food product for a district, keeping in perspective the **focus of the scheme on perishables**.
- **Operation Greens:** The Ministry of Food Processing Industries (MoFPI) has been implementing the "**Operation Greens**" scheme since November 2018 with a budget of **Rs. 500 crore**. The scheme aims to promote **Farmer Producers Organizations (FPOs)** and develop infrastructure for **Tomato, Onion, and Potato (TOP) products**. It has now been expanded to include **22 perishable products** to enhance **value addition** and **agricultural exports.**
- **Food Processing Fund (by NABARD)**: A **special fund** in the **NABARD** worth **INR 2,000 crore**, designated as the **Food Processing Fund**, was set up in the **FY 2014-15** for providing **affordable credit to food processing units in Mega & Designated Food Parks.**
- **FSSAI under the Ministry of Health and Family Welfare** has issued the **Food Safety and Standards (Food Product Standards and Food Additives) Regulations, 2011** and the **Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011** which prescribe the quality and safety standards respectively for food products.
- **Farm to Factory Gate (Procurement at Village Level)**: The upgrading of **22,000 rural haats** into **Gramin Agriculture Markets (GrAMS),** was a step in the right direction.

NATIONAL FOOD PROCESSING POLICY 2019

OBJECTIVES

- **To reduce** wastages, increase value addition, ensure better prices for farmers while ensuring availability of affordable and quality produce to consumers.

- **To address** the challenges of **malnourishment and malnutrition** by ensuring availability of **nutritionally balanced foods.**
- **To make** food processing more competitive and future ready through creation of adequate **infrastructure facilities** along the **supply chain**, use of **modern technology** and **innovation, promoting traceability, food safety, encouraging optimum capacity utilization** of **assets and resources**.
- **To position** India as the most **preferred investment destination for agribusiness** and **food processing**.
- **To generate** more opportunities for the **development of the agribusiness** and Food Processing Industry.

SUPPLY CHAIN MANAGEMENT

- Supply chain management (SCM) is the **management of the flow of goods**. It includes the movement and storage of raw materials, inventory and finished goods from point of origin to point of consumption.
- **It entails actively streamlining a company's supply-side activities in order to maximize customer value and gain a competitive advantage in the market.**

UPSTREAM AND DOWNSTREAM REQUIREMENTS

- In the food processing industry, the terms **"upstream" and "downstream"** are commonly used to describe different stages of the production and supply chain.
    - **Upstream Requirements:** refer to the activities and processes involved in the early stages of the food processing industry. It includes the sourcing of raw materials, agricultural production, and procurement.
    - **Downstream Requirements:** refer to the activities and processes that occur after the raw materials have been sourced and brought to the food processing facility. It involves the transformation of raw materials into finished food products and their subsequent distribution to consumers.

Upstream	Downstream
• Upstream refers to all the activities needed to gather the materials required to create a product. • The upstream part of the production process does not do anything with the material itself, such as processing the material. This part of the process simply finds and extracts the raw material.	• The downstream stage in the production process involves processing the materials collected during the upstream stage into an end product. • The downstream stage further comprises the **genuine sale of that product** to other **businesses, governments or private individuals**.
• Therefore, any industry that relies on the extraction of raw materials commonly has an upstream stage in its production process. • Inward movement of the resources towards the processing plant/centre.	• Downstream process has **direct contact** with customers through the finished product. Thus Labour force requirement is more when compared to Upstream. • Outward movement of the resources away from the processing plant/centre.

SIGNIFICANCE OF SUPPLY CHAIN MANAGEMENT (SCM)

- **Cost of Doing Business**: SCM lowers the cost of doing business by reducing purchasing and production expenses. For example, if you own a grocery store and buy tomatoes directly from the farmer, you eliminate the expense of having a third party buy for you.
- **Vital in the Food Industry:** In the food industry, the efficiency of the supply chain is vital to profitability and safety. When one link in the food supply chain, such as a farmer or packaging plant, isn't operating at peak performance, every other link in the chain is negatively affected.
- **Strategic Plan**: Supply chain management supports the strategic plan for the business and helps to build the infrastructure to support future growth, even on a global scale.
- **Balance in Business**: It helps the business balance the supply of products with market demand.
- **Effective Customer Service**: It allows for more efficient and effective customer service. Customers receive their products quickly and as promised.
- **Ensure Human Survival**: It Helps Sustains Human Life, Improves Human Healthcare, Protects Humans from Climate Extremes.
- **Improve Quality of Life**: SCM improves the quality of life by Improves Standard of Living, Foundation for Economic Growth, Job Creation, Opportunity to Decrease Pollution, Opportunity to Decrease Energy Use.
- **Brand Development:** Controlling manufacturing processes, for example, can improve product quality while lowering the risk of recalls and lawsuits and assisting in the development of a strong consumer brand.

CHALLENGES TO SUPPLY CHAIN MANAGEMENT

- **Fragmented Supply Chain**: The long and fragmented supply chain results in the **wastage** and **price escalations**. This is because of the large share of unorganized players in the supply chain and operating commercial viability challenges.
- **Inadequate Cold Storage and Warehousing Facilities**: Warehousing is a key requirement in the overall supply chain; it is mostly dominated by unorganized players. **20%** of **warehousing** is **organized** currently with **70% of the organized market** controlled by the Government.
- **Logistics Issues**: still face challenges related to quality and connectivity. Indian national **highways account for only 2% of the total road network** but **carry 40% of all cargo**. Lack of connectivity to ports leads to cost escalations and delays in the goods transferred. **Lack** of **last-mile connectivity** from **rail transporters.**
- **Slowdown in Production Growth**: With around **67 percent of landholdings** being **marginal**, with an **average size of 0.4 hectares, more than half of marginal farmers** are likely to not have any excess income to spare beyond subsistence, hindering the improvements in farm-level productivity.
- **Large Informalization**: More than **50% of the industries in the food processing sector** is concentrated in the **informal sector** and are **small scale industries.** Therefore they cannot achieve economies of scale and avail the benefits from the formal financial sector.
- **Underdeveloped Processed Food Market**: Indian processed food market is still evolving and still is at its **infancy stage**.

SUGGESTIONS/MEASURES NEEDS TO BE TAKEN

- **Regulate Demand-Supply**: Demand and supply uncertainty requires an **efficient supply chain strategy** to optimize profitability. The **supply chains** should adopt a **combination of the risk-hedging and responsive supply chain.** Supply chains must try to cope with demand and supply chain uncertainty to be responsive to unpredictable demand.
- **Public Private Partnership (PPP)** is another strategic solution. Supply chains like washing, waxing, grading, sorting, packing, pre-cooling, handling facilities, insurance, finance, transport and processing facilities would add value to supply chain functioning.
- **National Agricultural Market (e-NAM):** It creates a pan India market, facilitates removal of intermediaries, thereby streamlining the entire supply chain.
- **Contract Farming Act**: The new contract farming Act further helps in improving the backward and forward integration of the supply chain.
- **Electronic Negotiable Warehouse Receipt (e-NWR):** To facilitate easy pledge financing by Banks and other financial institutions.
- **Logistic Improvement**: The **logistic bottlenecks** of the supply chain are being taken care of by leveraging the existing **PM-Gram Sadak Yojana, BHARATMALA and SAGARMALA** scheme.
- **Other Initiatives:** There are initiatives such as **India Food Banking Network (IFBN),** which is promoting the concept of collaborative consumption with support from the private sector and civil society organization.

GOVERNMENT INITIATIVE - PRADHAN MANTRI MATSYA SAMPADA YOJNA (PMMSY)

- The **Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying**, Government of India is implementing Pradhan Mantri Matsya Sampada Yojana.
- A scheme to bring about the Blue Revolution through sustainable and responsible development of the fisheries sector in India at an estimated investment of **Rs. 20,050** crores for holistic development of the fisheries sector including welfare of fishers.
- PMMSY is being implemented in all the States and Union Territories for a period of 5 years from **FY 2020-21 to FY 2024-25.**
- PMMSY is designed to **address critical gaps** in the **fisheries value chain** from fish **production, productivity and quality to technology, post-harvest infrastructure and marketing.** It aims to modernize and strengthen the value chain, **enhance traceability** and establish a **robust fisheries management framework** while simultaneously ensuring the **socio-economic welfare of fishers and fish farmers.**

OBJECTIVES:

- **Harness the Potential:** Harness the potential of the fisheries sector in a sustainable, responsible, inclusive and equitable manner.
- **Enhance Fish Production:** Enhance fish production and productivity through expansion, intensification, diversification and productive utilization of land and water.
- **Strengthen Value Chain:** Modernize and strengthen the value chain including post-harvest management and quality improvement.
- **Double Fish Farmers Income:** Double fishers and fish farmers' incomes and generate meaningful employment.

- **Contribution in GVA**: Enhance the contribution of the fisheries sector to Agricultural GVA and exports.
- **Socio-Economic Security:** Ensure social, physical and economic security for fishers and fish farmers.
- **Management and Regulation:** Build a robust fisheries management and regulatory framework.

CONCLUSION:

- Food processing in India has trodden a long path of transformation, from merely a household activity to a prominent industrial sector impacting the national economy, especially the rural one.
- This sector links unorganized farming communities with the formal industrial sector to advance the rural economy. It is also capable of addressing critical issues of **food security**, **food inflation, food wastage and nutritional security** to the masses.

Mega Food Parks Scheme:

- **Launched in 2008:** Aims to support the creation of food processing units.
- **Limited Progress:** As of March 2018, only 10 out of 42 approved projects were operational.
- **Reasons for Delay:**
  - Difficulty securing bank loans for projects.
  - Delays in obtaining government clearances for infrastructure (roads, power, water) at park sites.
  - Lack of special incentives for setting up processing units within the parks.
  - Unwillingness of co-promoters to contribute their share of equity.
- **Committee Recommendations:**
  - Promote smaller agro-processing clusters near production areas to better serve individual or smaller processing units.
  - Establish processing and value addition units in strategic locations (rural/production areas) for key sectors like pulses, millets, fruits, vegetables, dairy, fisheries, and poultry. Public-private partnerships are encouraged.

E-commerce and Supply Chain Management in food processing sector

- **Reduced Costs:** E-commerce helps cut distribution and transaction costs.
- **Faster Development:** Speeds up product development by providing quicker feedback loops.
- **Improved Information:** Provides more information for both buyers and sellers.
- **Increased Choice:** Expands customer options and access to a wider range of suppliers.
- **Faster Delivery:** Reduces the time taken between order placement and product receipt

Key Words: Sunrise industry, Demographic dividend, Nutritional value, Crop diversification, Forward-backward linkage, Upward-downward linkage, Organic farming, Growing urbanization, Agro-climatic zones, Harvest and post harvest losses, Food security, Supply-demand obstacles, Regional disparity, Infrastructural constraints, Fragmented supply chain, Second green revolution and rainbow revolution, Customized logistics, Public-private partnership, Mega Food Park, ColdChain, Agro-Processing Clusters (APC), Food Testing Laboratories.

Previous Year Questions		
1.	What are the challenges and opportunities of the food processing sector in the country? How can income of the farmers be substantially increased by encouraging food processing?	2020
2.	Elaborate on the policy taken by the government of India to meet the challenges of the food processing sector.	2019
3.	Examine the role of supermarkets in supply chain management of fruits, vegetables and food items. How do they eliminate the number of intermediaries?	2018
4.	What are the reasons for poor acceptance of cost-effective small processing units? How will the food processing unit be helpful to uplift the socio-economic status of poor farmers?	2017
5.	What are the impediments in marketing and supply chain management in industry in India? Can e-commerce help in overcoming these bottlenecks?	2015
6.	India needs to strengthen measures to promote the pink revolution in the food industry for better nutrition and health. Critically elucidate the statement.	2013

11 Land Reforms

INTRODUCTION

"Democracy and socialism are means to an end, not the end itself. If democracy means the freedom of the individual, if it means freedom from poverty, then land reform is the touchstone of democracy." **- Jawaharlal Nehru**

In India, the term "land reforms" refers to the actions taken by the government to redistribute land from major landowners to marginal or landless farmers to combat social inequality, lessen rural poverty, and advance agricultural development. India's agrarian policy has included land reforms as a fundamental component ever since the nation attained independence in 1947.

Land Reforms:
- Abolition of intermediaries like zamindars, jagirdars etc.
- Land ceiling laws to fix statutory limits on land ownership, with excess land to be appropriated by government.
- Tenancy reform to provide security of tenure to the tenants, including heritable rights, decreased rents for share-croppers and ownership of land in some states.
- Land consolidation to address land fragmentation. Consolidated land was awarded in place of scattered landholdings. Cooperative farming to address issue of small landholdings of majority of farmers.
- **Land record modernisation:** includes efforts at making land records available to all to check property frauds and land disputes. E.g., land record digitization.
- **Land acquisitions and compensations:** Efforts to make the acquisition process transparent and providing fair compensation for it. E.g., LARR Act 2013

In **India** the **average land holding size is 1.08 hectares.** There is **high inequality** existing across **caste, religion, gender, states** when it comes to distribution of land (**10th Agricultural Census**):
- **Less than 13% of Indian farmland are owned by Women**
- **Small and Marginal farmers own 86% of Land in India**
- **Average size of holding is high in Nagaland (5 ha) and lowest in Kerala (0.18 ha).**

The achievements of land reforms in post-independent India can be seen as under:
- Abolition of zamindari system ensured direct relationship between the state and landholders. This ensured effective measures for land improvement.
- Tenancy Reforms ensured protecting the rights of tenants and providing them with security of tenure. These were particularly successful in communist states like Kerala and West Bengal.
- Land consolidation measures that were successful in Punjab, Haryana and Western UP provided foundation for the success of Green Revolution in these states
- Increased literacy and awareness regarding land rights and constitutional provisions related to them
- Improvements in agricultural productivity as landless farmers had a stronger incentive to invest in their land and adopt better agricultural practices after getting ownership rights.
- Redistribution of Land promoted more equitable land ownership, hence reducing rural poverty.

SUCCESS OF LAND REFORMS AND THE FACTORS RESPONSIBLE

Success of Land Reforms in India	Factors Responsible for the Success
• **Abolished exploitative land tenure systems** prevalent in agrarian society. • **Distributed** the surplus land among the landless and the weaker sections of the society. • **Provided** security of tenure to the tenants through Land Tenancy laws. • In some cases, tenants are even **given ownership rights.**	• **Political mobilization during freedom struggle** based on agrarian issues. This political awareness and education facilitated the acceptance of land reforms for the development of agriculture. • **Kisan Sabhas and Farmers Associations** also helped farmers organize themselves and raise their demands. • **Judicial backing and progressive interpretations of constitutional provisions** aided in land reforms. **Eg-** land reform legislations through **IX schedule.**

• Fixed rent in the range of 25-33%. • The cumulative effect of the **abolition of Zamindari, tenancy legislation, and ceiling legislation** motivated the cultivators to invest and improve agricultural practices. • They made a significant **positive impact on poverty removal.** • Lower castes have become more **organized and assertive** about their rights. • **Brought fundamental changes in the agrarian economy**, rural social structure, and rural power structure. • Moved Indian society towards an **egalitarian society.** • **Increased democratization of Indian polity** and reduction in the influence of the dominant sections of the society.	• Tenancy reforms were most successful in Kerala and West Bengal. • **Operation Barga:** In West Bengal Operation Barga was launched in 1978 with the objective of achieving the registration of sharecroppers and providing them permanent occupancy and heritable rights and a crop division of 1:3 between landowner and sharecropper. • **Advent of various NGOs** and **cooperatives** that helped farmers reap the benefits of such laws. • **Green Revolution: High yield variety (HYV) seeds,** inorganic fertilizers and subsidies on diesel and electricity that increased productivity manifold during **Green Revolution**.

LAND REFORMS AND AGRICULTURE PRODUCTIVITY

Land reforms were not only instruments of redistribution but of social transformation. They empowered the farmer and incentivized them to adopt advanced agricultural techniques. From a **'ship to mouth'** existence, India has become one of the leading global producers (as well as exporter) of agricultural commodities.

Land Reforms & Rural Poverty Reduction

- **Increased Agricultural Growth and Productivity:** Land Reforms led to **Enhanced farmers' income** and rural poverty reduction.
- **Increased Access to Land:** Land Reforms increased the access to land for the poor landless masses by the redistribution of land ensures them an **income guarantee.**
- **Increased Income:** Land reform leads to **increased rural agricultural wages** that help in ensuring more income to the rural landless laborers and thus crucial to rural poverty reduction.
- **Abolition of Intermediaries:** It has strengthened the position of the actual landholders and cultivators that help them to enhance their social and economic stature.
- **Agricultural Credit:** Access to credit becomes easier due to land ownership under tenancy law. Access to credit & increase in land holdings incentivize farmers to invest in new farming practices.
- **Land Equity:** Marginalized farmers got ownership over more land area and thus increased in social status.

LAND TITLING SYSTEMS IN INDIA

Land titling is the process of establishing and recording ownership rights over land. In India, the land titling system is complex and evolving, with different procedures and features across states. Here's a breakdown of the main concepts:

TYPES OF LAND TITLING SYSTEMS:

- **Presumptive Titling:** This is the current dominant system in India. Land records are maintained, but they primarily reflect possession or historical transactions, not guaranteed ownership. Disputes require evidence to prove ownership.
- **Conclusive Titling:** This system is proposed to provide state-guaranteed ownership titles. The government registers individual titles, taking responsibility for their accuracy. Any ownership disputes are settled with the government, not the title holder.

CURRENT STATE OF LAND TITLING:

The present land titling system in India is primarily characterised by presumptive titling, meaning land records exist but don't offer guaranteed ownership titles. This system comes with its own set of challenges and limitations:

- **Presumptive System:** Land records reflect possession or historical transactions, not guaranteed individual ownership.
- **Limited Accuracy**: Records can be incomplete, outdated, or inaccurate, leading to disputes and difficulties in proving ownership.
- **Multiple Claims:** Complex inheritance and land transfer systems often result in overlapping claims and ownership ambiguity.

- **Bureaucracy and Corruption:** Delays and corruption can plague the existing system, hindering title registration and updates.

RECENT DEVELOPMENTS:

- **Model Land Titling Act**: The central government has drafted a Model Land Titling Act, aiming to standardise procedures and facilitate a shift towards conclusive titling.
- **Digitization of land records:** Several states are undertaking initiatives to digitise land records, promoting transparency and accessibility.
- **Blockchain technology:** Some pilot projects are exploring the use of blockchain technology for secure and tamper-proof land record management.

BENEFITS OF CONCLUSIVE TITLING:

- **Reduced land disputes**: State-guaranteed titles can potentially decrease the number of land-related disputes and litigation.
- **Improved access to credit:** With secure ownership titles, farmers and landowners can more easily access loans and credit for their agricultural activities or other business ventures.
- **Greater market efficiency:** Accurate and transparent land records can facilitate land transactions and promote a more efficient land market.

CHALLENGES OF CONCLUSIVE TITLING:

- **High initial costs:** Implementing a nationwide conclusive titling system would require significant resources and investment in infrastructure and personnel.
- **Fraudulent claims:** There's a risk of fraudulent claims arising during the initial titling process, especially in areas with unclear land ownership histories.
- **Social and political complexities:** Land ownership issues can be deeply intertwined with social and political dynamics, requiring careful consideration of potential societal impacts.

LAND RECORDS IN INDIA - DIGITIZATION & MODERNISATION

DIGITIZATION OF LAND RECORDS

In order to upgrade the land records system in the nation and establish a definitive land-titling system with title guarantee, the Government of India initiated the National Land Record Modernization Programme (NLRMP), a centrally supported initiative, in 2008. Thereafter, in 2016 the NLRMP underwent a redesign and was called the Digital India Land Records Modernization Programme (DILRMP).

It is a Central Sector scheme that has been extended to 2023-24, to complete its original targets as well as expand its ambit with a slew of new schemes.

Implementation: It is being implemented by the Department of Land Resources (Ministry of Rural Development).

SOME FEATURES OF DIGITIZATION OF LAND RECORDS

- Computerization of existing land records and transfers and registration process
- Digitization of maps and integrating all data types like spatial and textual records
- Survey and resurvey and update settlement records
- Development of core GIS and capacity building
- DLRMP intends to move towards conclusive and state-guaranteed titles from presumptive titles.

INITIATIVES FOR DIGITALISATION:

- **National Generic Document Registration System**
  - The current manual registration system of land transactions is being replaced by an online system for all land transfers and sales, which is a significant change.
  - It represents a significant advancement toward **"One Nation One Software"** and national integration.
- **Unique Land Parcel Identification Number**
  - Referred to as **"the Aadhaar for land,"** this number would serve as a unique means of identifying each surveyed parcel of land and thwart property fraud, particularly in rural India's hinterlands where land records are often disputed and out-of-date.

GOVERNMENT EFFORTS TOWARDS DIGITIZATION OF LAND RECORDS:

National Council of Applied Economic Research (NCAER) (1956)	It is an annual land records index prepared by Delhi-based think- tank National Council of Applied Economic Research (NCAER). Madhya Pradesh, West Bengal and Odisha are the simplest performing Indian states in land record digitisation.
"Bhoomi Project" (2000)	Karnataka was the primary state in India to computerised land records under the "Bhoomi Project".
Digital India Land Records Modernization programme (DILRMP) (2008)	The target of the programme was to streamline and reduce the scope of land and property disputes, thereby improving transparency within the maintenance of land records.
SVAMITVA Scheme: Survey of Villages and Mapping with Improvised Technology in Village Areas. (2021)	It is a scheme for mapping the land parcels in rural inhabited areas using drone technology and Continuously Operating Reference Station (CORS). This Scheme comes under the Ministry of Panchayati Raj.

ACHIEVEMENTS OF DIGITISATION OF LAND RECORDS:

Significant progress in computerization of land records across the country.

- The Government has achieved **94% digitization targets pan-India,** as per the **Digital India Land Records Modernization Programme.**
- As per **Ministry of Rural Development, 2022**, it reduced land disputes and suggested a decrease in land disputes due to clearer and accessible land records

Challenges in Digitalisation:

- **Need of multiple documents across departments**: In India, land ownership is established through multiple documents maintained by different departments, making it cumbersome to access them, thus affecting digitization.
- **Poor progress in computerization of land records:** While some states like Karnataka and Odisha have completed 100% computerization of land records, many others are still lagging in the implementation.
- **Land conflicts affect digitization:** Hundreds of laws and the lack of clear titles make up about two-thirds of all civil cases in Indian courts, further affecting the modernization of land reforms.
- **System of registered sale deeds:** allow only the registration of transaction not the title as per the Transfer of property Act 1882 and Registration Act 1908.
    - **Registration Act, 1908:** Do not provide for mandatory registration such as transaction of acquisition of land by government and land on lease for less than a year.
- **Data discrepancies:** Since the land documentation data is maintained by different government departments, they are not updated often.
- **High cost of Property Registration:** People avoid registration to avoid payment for stamp duty.
- **Cyber security:** vulnerability to cyber threats, issue of internet connection and networks.

WAY FORWARD

- Continued efforts are required to address data quality issues and ensure interoperability of land record systems.
- Increased focus on capacity building and training for land record officials.
- Expansion of online services and awareness programs to ensure wider citizen participation.
- Integration of land records with other government databases for better planning and development.

DILRMP is a transformative initiative that has significantly improved land record management in India. By addressing the remaining challenges and focusing on continuous improvement, DILRMP can further enhance transparency, efficiency, and accessibility in land administration, contributing significantly to India's economic and social development.

SVAMITVA SCHEME

- **Aim:** This scheme is a reformative step towards establishment of clear ownership of property in rural inhabited ("Abadi") areas, by mapping of land parcels using drone technology and providing 'Record of Rights' to village household owners with issuance of legal ownership cards (Property cards/Title deeds) to the property owners.

- **Implemented by:** The Scheme is implemented with the collaborative efforts of the Ministry of Panchayati Raj, State Revenue Department, State Panchayati Raj Department and Survey of India.
- **Coverage:** There are about 6.62 lakh villages in the country which will be eventually covered in this scheme. The entire work is likely to be spread over a period of five years.

Objectives:

The scheme seeks to achieve the following objectives: -

- Creation of accurate land records for rural planning and reduce property related disputes.
- To bring financial stability to the citizens in rural India by enabling them to use their property as a financial asset for taking loans and other financial benefits.
- Determination of property tax, which would accrue to the GPs directly in States where it is devolved or else, add to the State exchequer.
- Creation of survey infrastructure and GIS maps that can be leveraged by any department for their use.
- To support the preparation of a better-quality Gram Panchayat Development Plan (GPDP) by making use of GIS maps.

Key Features:

- **Drone-based mapping:** The scheme utilises drone technology to map rural abadi areas, providing accurate and detailed data for property identification and record keeping.
- **Community participation:** Local residents are actively involved in the mapping process, ensuring transparency and accuracy of data.
- **Digital land records:** Property information is digitised and stored electronically, enhancing transparency and accessibility.
- **Issuance of property cards:** Residents receive legal ownership documents (property cards) recognized by the government.

ULPIN SYSTEM

The Unique Land Parcel Identification Number (ULPIN) System is a national initiative in India aimed at digitising and standardising land records across the country. It is also known as Bhu-Aadhaar, signifying its role as a unique identifier for land parcels, similar to the Aadhaar number for individuals.

Objectives:

- **Standardisation:** To create a uniform and interoperable system for land records across all states and union territories, eliminating variations in existing land identification systems.
- **Transparency:** To provide a single source of truth for land ownership information, accessible to all stakeholders, including citizens, government agencies, and financial institutions.
- **Efficiency:** To streamline land transactions and dispute resolution through accurate and readily available land records.
- **Economic Growth:** To facilitate easier access to land-based credit and investment opportunities, boosting the economy and rural development.

Key Features:

- **Unique 14-digit identifier for each land parcel:** This identifier is based on the geo-coordinates of the parcel, ensuring its uniqueness and permanence.
- **Integrated Land Information Management System (ILIMS):** A centralised platform for storing and managing land records, including ownership details, spatial data, and historical transactions.
- **Open standards and interoperability:** The system is designed to be compatible with existing land record systems and other government databases, facilitating seamless data exchange.
- **Security and privacy:** The system implements robust security measures to protect sensitive land information and ensure user privacy.

HURDLES IN LAND REFORMS IN INDIA

The efforts towards land reform are tardy and slow in India. Following reasons can be attributed for poor progress of land reforms.

- **Lack of Political Will:** The enactment and effective implementation of progressive reforms are beset by a lack of political will. Strong political decisions, as well as effective political support, guidance, and control, are necessary for such drastic steps.
  - However, the democratic political power structure of the nation prevents political will from emerging.

- **Absence of Reliable Records**: The main obstacle preventing land reforms from moving forward more quickly is the lack of accurate and updated land records.
  - There hasn't been a methodical program evaluation, and the reporting system is unreliable and inadequate. As a result, it is impossible to identify what is preventing land reform from being implemented.
- **Legal Challenges**: Implementing land reforms in the nation is hampered by legal issues as well. Protracted litigation and legal loopholes impede the progress of land reforms. There are numerous flaws in the laws pertaining to land reforms.
- **Inadequate Financial Support:** An additional barrier to land reforms is a lack of financial support. Insufficient funding has been set aside for land reform initiatives. The inadequate outcomes of land reform initiatives can be mostly attributed to this.
- **Improper Implementation:** The revenue administrations of the individual states are responsible for carrying out land reform.
  - Land reforms receive the least attention because maintaining public order, collecting land revenue, and other regulatory duties are given top importance.
- **Indifferent Attitude of the Administration:** The state revenue department bears complete accountability for carrying out land reforms.
  - The attitude of the administrative staff is quite indifferent and their behaviour is cold. In addition, landlords have a significant influence over the village officials.
- **Lack of awareness and pressure from Below:** Land reform recipients do not belong to a distinct social or economic group. Consequently, there hasn't been any internal pressure for its successful execution.

WAY FORWARD

- **Administrative Changes:** Administrative changes at the state level that streamline the collection and maintenance of land data, for example - Karnataka's BHOOMI Project.
- **Ten Point Agenda of the Government of India:** It is a strong beginning in addressing some of these seemingly intractable problems. These are:
  - The agreement of the State governments on the National Land Reform Policy.
  - National Legislation for guaranteeing shelter land to the millions of homeless and landless, particularly in rural areas.
  - Stronger Implementation of the Central Acts related to Forest Lands.
  - Engendering Land Ownership to ensure strengthening of women's equality.
  - Ensuring the functioning of Land Tribunals.
  - Oversight by bodies jointly governed by Government and Civil Society.
- **Draft National Land Reforms Policy**: The draft has five goals:
  - Restore land unjustly taken from vulnerable communities such as Dalits (untouchables) and Tribals.
  - Protect the land of the Dalits and Tribals including the commons that they depend on going forward
  - Liberalize leasing laws.
  - Improve land rights of women.
  - Appropriate amendment to Forests Right Acts, 2006.

Previous Year Questions		
1.	State the objectives and measures of land reforms in India. Discuss how land ceiling policy on landholding can be considered as an effective reform under economic criteria.	2023
2.	How did land reforms in some parts of the country help to improve the socio-economic conditions of marginal and small farmers?	2021
3.	Discuss the role of land reforms in agricultural development. Identify the factors that were responsible for the success of land reforms in India.	2016
4.	Establish the relationship between land reform, agriculture productivity and elimination of poverty in the Indian Economy. Discussion the difficulty in designing and implementation of the agriculture friendly land reforms in India.	2013

12 Industries in India

Following Independence, the Indian **government highlighted the importance of industrialisation** in the country's long-term economic growth. **The Industrial Policy Resolution (IPR), 1956** laid out the blueprint for industrial growth.

- **In 1991,** the Indian government resolved to promote the private sector's involvement in industrial growth, liberalise the licensing system, and enable international businesses to compete in the home market as well as domestic players to explore foreign areas.
- **Liberalisation, Privatization, and Globalization (LPG) is a type of industrial growth paradigm** which aims at reducing government control and increasing the role of the private sector.
- India's vision of a **USD 5 Trillion Economy** will significantly depend on the growth of the Industrial sector.

NEW INDUSTRIAL POLICY - 1991

- **Abolition of Export Subsidies:** Export subsidies like the system of providing cash compensatory support to exporters were abolished and supplementary licences which helped the exporters to import were removed.
- **Decanalisation:** State trading corporations were divested of their monopoly over import of some goods.
- **Unified Exchange Rate:** This was introduced in 1993 which was linked to the market and exporters could convert their entire dollar earnings at market-linked exchange rate.
- **Abolition of Industrial Licensing:** It abolished all industrial licensing except a short list of 18 industries related to the security and strategic concerns, social reasons, hazardous chemicals and items of elitist consumption. Also the Monopolies and Restrictive Trade Practices Act was abolished in one stroke.
- **Foreign Investment:** Direct foreign investment up to **51%** and Now, Private companies are not required to obtain the permission of the government for entering into technology agreements with foreign enterprises.
- **Disinvestment:** The government announced a policy on gradual disinvestment of government equity in public sector units.
- **Removal of Mandatory Convertible Clause:** As per this clause, banks had the right to convert their loan amount into equity whenever they felt so. It was used by the Government to nationalise private firms. This was removed under the new policy.

YEARS OF LPG REFORMS - PERSISTENT CHALLENGES

- **Agricultural Development:**
  - Indian agriculture's growth rate falls below the targeted 4%, significantly lower than the double-digit growth rate of the service sector.
  - Despite being a major food grain producer, India's global export share of agricultural commodities remains stagnant at 2%, ranking 10th globally.
- **Stagnation in Manufacturing Sector:** The manufacturing sector's contribution to India's GDP has plateaued at 16-17% since the 1991 reforms.
- **Jobless Growth:** Employment elasticity is minimal, with a 1% increase in GDP growth rate resulting in only a 0.1% rise in employment.
- **Domination of Informal Sector:** Approximately 90% of India's workforce is engaged in the informal sector, characterized by low wages, poor productivity, and absence of social security benefits.
- **Lack of Inclusive Growth:** Wealth concentration remains unchecked, with the top 10% owning over four times the wealth of the remaining 90%.
- **Provision of Basic Services:** Insufficient allocation of financial resources for basic services like education (3% expenditure vs. 6% target) and health (1.5% expenditure vs. 3% mandate).
- **Balanced Regional Development:** Liberalization has led to uneven regional development, with some areas experiencing rapid progress while others lag behind, creating disparities within and across states.
- **Poor Innovation Ecosystem:** Research and Development (R&D) expenditure as a percentage of GDP stagnates at 0.7% over the past two decades.

WAY FORWARD - NEXT GENERATION OF REFORMS

- **Draft Industrial Policy, 2022:** The draft policy should be finalised at the earliest with public consultation. The aim of the draft policy is:

- **Make in India:** The **Economic Survey 2019-20** suggested this scheme to integrate **'Assemble in India' to 'Make in India'**. This can create **4 crore well-paid jobs by 2025** and **8 crores by 2030**.
- **Import Duty:** NITI Aayog suggested that India should move towards an average duty of about 7% across products and imposing anti-dumping duties on cheap Chinese products.
- **Integration with Global Economy:** India should focus on early finalisation of its Free Trade Agreements with countries like UK, Israel etc. and consolidate on the FTAs signed with UAE, Australia etc.
- **Agricultural Growth:** Efforts should be made towards reforms in agriculture to involve the private sector in areas like drip irrigation, organic farming, marketing of products to make Indian agriculture climate resilient and engine of rural and inclusive growth.
- **Investment in Social Sector:** The economic growth should also lead to social development and efforts should be made towards better health, education, skills and other social provisions to reap demographic dividend.
- **Addressing Environmental Issues:** The environmental aspects should also be included in the economic development to ensure that there is less environmental damage.

NEW INDUSTRIAL POLICY

The government has put the implementation of the **new industrial policy (NIP 23) on hold** which has been under development for more than two years. The Union commerce ministry released the **draft of Industrial Policy to replace the 1991 policy.** This will be the **third industrial policy, after the first in 1956 and next in 1991.**

- **Disruptions in Economic Activity:** The new industrial policy has been fuelled primarily by the disruptions in economic activity due to the COVID-19 pandemic and the shocks driven by uncertainties and disruptions in supply chains.

National Manufacturing Policy (NMP, 2011):

- The policy aimed to **increase the manufacturing sector's contribution to GDP** from a stagnant 15% since the 1980s to at least 25% and generate 100 million new jobs.
- It faced **constraints such as inadequate physical infrastructure, a complex and corrupt regulatory environment, and a shortage of skilled manpower hindering manufacturing growth.**

- **Objectives of NIP 23:** This resurgence of industrial policy to deal with exogenous shocks has two objectives:
- Enhance the pace of economic activity at the national level
- Devise mechanisms to impart resilience to the industrial sector.

About Make in India (MII):

- It was **launched by India in September 2014** aimed at **creating a robust and competitive manufacturing industry.** The Make in India initiative built upon the dynamic goals of **NMP 2011,** aspires to "transform India into a global design and manufacturing export hub," positioning MII for the global market.

Stated objectives of MII: To increase the manufacturing sector's growth rate to **12-14% per annum;**

- To create 100 million additional manufacturing jobs in the economy by 2022;
- To ensure that the manufacturing sector's contribution to GDP is increased to 25% by 2025.

Significance of MII:

- **Increased FDI:** FDI inflows in India increased to \$83.6 billions in 2021-22 from \$ 45.15 billion in 2014-2015.
- **Improvement in the ease of doing business in India:** The government has implemented various reforms to simplify regulatory processes, reduce bureaucracy, and create a more favorable environment for businesses.
- India is ranked **63 among 190 economies** in the ease of doing business, according to the latest World Bank(2020) annual ratings.
- **Skilling Labour force:** The government has launched programs like Skill India to enhance the employability of the workforce and promote entrepreneurship among the youth.
- This has resulted in the creation of a skilled labor force, which is vital for the success of manufacturing industries.

- **Smartphone Manufacturing in India:** Local manufacturing of mobile phones grew at 23% compounded annual rate between 2014 and 2022.
    - India has become the second-largest mobile phone manufacturing country after China, with cumulative shipments of locally produced handsets crossing two billion during 2014-2022.
- **Growth in Toy Industry:** Complimented by sincere efforts of domestic toy manufacturers, the import of toys in FY21-22 have reduced by 70% to USD 110 Mn.
- **Growth in localism mindset among Indian consumers:** As per the report by KPMG on consumption habits of Indian consumers, around 60 percent of respondents across all age groups expressed their desire to replace foreign brands with indigenous brands.

Challenges with Make in India:

- **Increased Protectionist policies:** There are concerns regarding expansion of protectionist policies to other sectors with the increased tariffs as this will lead to emergence of shortages, black markets, and widespread rent-seeking.
    - India recently imposed an import ban on 928 military equipment for self-reliance in the manufacturing of defence items.
- **Biasness towards Capital Intensive Industries:** The industrial policy practice through the PLI scheme is biased towards capital-intensive industries.
    - The scheme focuses on providing subsidies to selected large and medium-scale industries.
    - Ex- automobiles, pharma, advanced battery cells, telecom equipment, etc. despite having comparative advantages in labour-intensive manufacturing activities.
- **Focus on Assembling rather than Manufacturing:** Major focus industries under the Make in India scheme are restricted to the assembling of knocked-down kits despite many global companies having set up units in the country.
    - Ex- Mobile, telecommunication and electronics equipment manufacturing, etc.
- **Stagnant Manufacturing Sector:** Despite the significant diversification of manufacturing observed in East Asian countries since the late 1970s, India's manufacturing share has remained stagnant at approximately 15% of the GDP.
    - Rather than adding 100 million manufacturing jobs, India reported a loss of 24 million jobs between 2016-17 and 2020-21, according to a recent analysis by Ashoka University's Centre for Economic Data and Analysis.

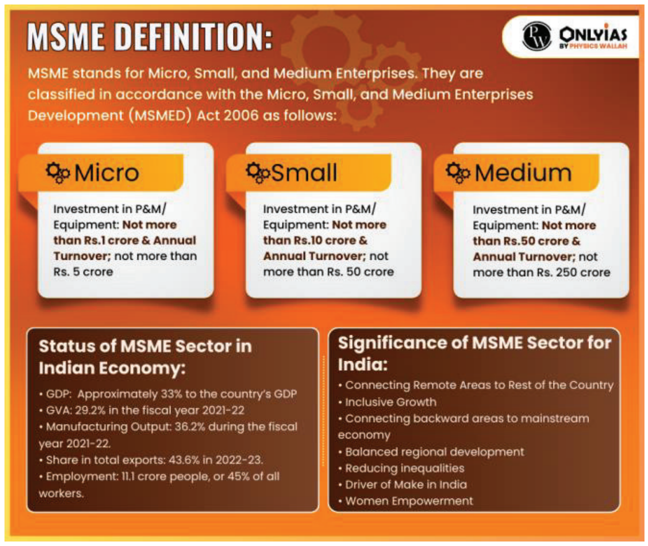
Way Forward:

- **Export Competitiveness:** Since the domestic market has its limitations, the focus must also be on exports.
    - To improve export competitiveness, there should be an attempt to reduce production costs, improve quality and be more innovative.
    - It should identify segments within the high value manufacturing value chain where it possesses a comparative cost advantage and can contribute effectively.
- **Expanding PLI to Labour Intensive Sectors:** The scope of the PLI scheme needs to be expanded to include labour-intensive sectors such as leather, garment, light engineering goods, toys, and footwear.
    - These sectors have maximum local value addition. Ex- textiles, food products, etc.
- **Financial Incentives:** India's industrial strategy under Atma Nirbhar Bharat needs to ensure that financial incentives are extended to sectors or firms that foster strong domestic inter-sectoral linkages and facilitate industrial upgrading.
- **Integrating 'Make in India' with 'assemble for the world':** In China, it worked in integrating its domestic manufacturing industries with assembling units for global 'network product' companies.
    - By importing components and assembling them in China for the world, China created jobs at an unprecedented scale.
    - Similarly, by integrating **"Assemble in India for the world" into Make in India,** India can raise its export market share to about **3.5 per cent by 2025 and 6 per cent by 2030.**

As per the Economic Survey (2019-20), this may create about 4 crore well-paid jobs by 2025 and about 8 crore by 2030.

UNLOCKING MSME POTENTIAL

According to the survey, **'Leveraging E-commerce for the Growth of MSMEs',** by Indian Council for Research on International Economic Relations, **technology may represent a survival threat rather than an opportunity for MSMEs** if not integrated with e-commerce platforms.

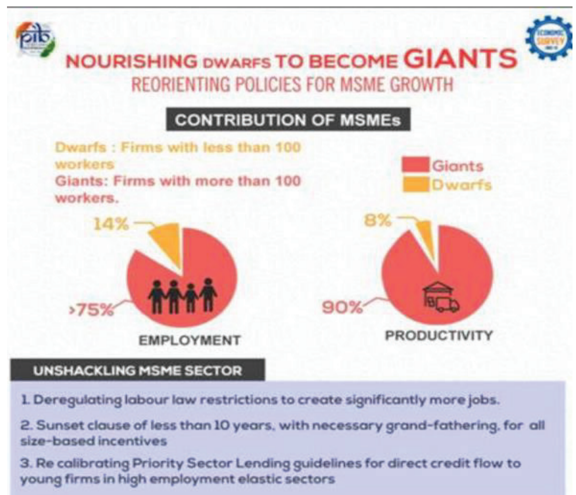


MORE ABOUT THE NEWS:

- **Rising Inequities:** Firms that are not integrated with e-commerce platforms find it challenging to access markets.
  - In contrast, firms integrated with e-commerce platforms are making deeper inroads into markets.
  - This is exacerbating inequities between firms linked to platforms and those which are not integrated.
- **Technology Divide:** Non-integrated firms have not joined platforms due to lack of knowledge and information about digital technologies and e-commerce platforms.
- **Rising profits with Digitalization:** With e-commerce platform integration, over 85 percent of surveyed MSMEs reported an increase in their total sales and profit margins.

CHALLENGES FACED BY THE MSME SECTOR:

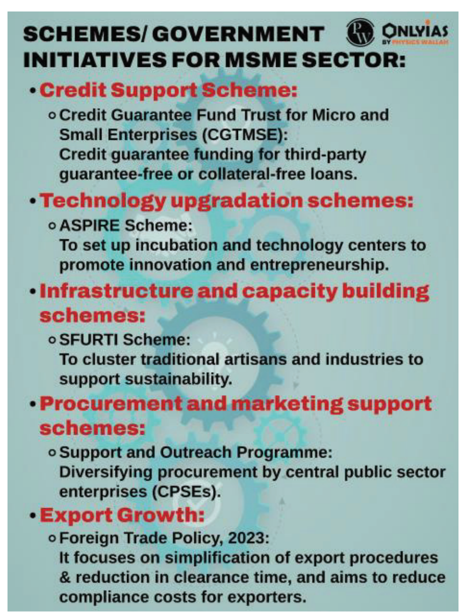
- **Informal Nature of Sector:** With over 90% of the MSME sector in the informal category, most of the micro-enterprises are unable to access formal credit or other government schemes or benefits.
  - Only about 16 per cent of MSMEs in India are financed through formal banking systems and the credit gap for MSMEs in India was estimated to be about Rs 16.66 trillion in 2018.
- **MSMEs and the Global Market:**
  - India's domestic market accounts for only about 2 percent of the global market size for these industries.
  - However, to address the global market, India must aim for at least a 10 percent share of the global trade.
- **Integration with 'E-commerce' Platforms:**
  - The rise of e-commerce platforms means MSMEs can compete in the global arena.
  - However, The DGFT estimates e-commerce exports to be at \$2-5 billion currently, which is less than five percent of the overall goods export from India and expects it to grow to \$200-300 billion by 2030.



- **Small Scale (Dwarfism):**
  - It is nearly impossible for a typical small business to first find customers abroad, and then navigate the logistical, financial and compliance complexities of the export sector.
  - However, 85 percent of MSMEs are classified as "dwarfs" — older than 10 years but still smaller than 100 employees.
- **Systemic Gender Discrimination:** It is preventing the realisation of significant untapped potential, as only 18% of registered MSMEs are owned by women.
  - Majority of women entrepreneurs remain in micro-MSME strata and over 3,057 women-owned MSMEs closed post-pandemic.

WAY FORWARD:

- **Introduce Separate Micro-MSME division:** It will provide targeted support and policies to help micro enterprises grow and transition into small and medium enterprises.



- **Bridging The Gap Between Integrated And Non-Integrated Firms (E-Commerce Platforms):** It will require investments in technology, digital skills, information, enhancing the capabilities and productivity of MSMEs.
  - This can be achieved by providing them with infrastructure services, financial services, managerial and business skills and enterprise support and training.
  - Study by the Institute of Governance, Policies and Politics shows that **1 per cent rise in imported digital services production inputs by MSMEs** results in a 0.4-0.8 per cent rise in MSME employment and a 0.04-0.08 per cent rise in labour productivity.
- **Initiate Support For Women-Owned MSMEs:** Implementing policies that promote women entrepreneurship.
  - Providing dedicated support, such as **access to capital**, **training, and networking opportunities,** will empower women-led micro MSMEs and contribute to inclusive economic growth.
- **Streamline The Rules Of Financial Regulation For Exports:** Reduce the burden on MSMEs and give them the flexibility to price their products dynamically.
  - Implementing a one-stop trade portal that brings together all information and processes related to exporting, and places it into a single, streamlined workflow.
- **Digitalisation:** There is a need for replicable digital solutions adapted for MSMEs, including digital enhancements for machinery and equipment currently in use.
  - Initiatives such as the Digital Saksham and the interlinking of the Udyam, Atmanirbhar Skilled Employee-Employer Mapping (ASEEM) portals have shown commendable results.
- **Formalisation of Sector: Udyam Registration** is a positive initiative in this regard.
  - More than 13 lakh informal micro-enterprises that have now become formalised and there is room to expand this broadly across the MSME sector.
- **Market Linkages:** The government should promote (RURBAN) clusters to provide them adequate market linkages and branding for their products/services.

CONCLUSION

MSMEs being the **growth engine of the economy**, there is a need to prepare a roadmap for a sector in addition to the ad-hoc initiative undertaken. An inclusive, sustainable vision to compete with the global MSMEs, by collaborating the industry groups, researchers, government and other stakeholders is the need of the hour.

SEMICONDUCTOR INDUSTRY

The government has agreed to prolong the **PLI (Production-Linked Incentive)** plan with a budgeted incentive of **Rs 76,000 crore** for the next six years in order to stimulate semiconductor manufacture in India.

SEMICONDUCTOR

- Semiconductors are essential materials regulating current in electrical devices.
- They form the basis of integrated circuits, microchips, and are vital for modern electronics.
- **Global Concentration:** Major semiconductor manufacturing is in Taiwan, South Korea, US, Japan, and China.
- **Strategic Imperative:** Governments recognize semiconductor manufacturing as crucial for national interests.
- **India's Goal:** Aiming to be a global hub for semiconductor design, manufacturing, and technology.
- **Semiconductor Mission:** India has initiated a mission to advance the chip and display industries.

NEED FOR PROMOTING THE SEMICONDUCTOR INDUSTRY

- Semiconductor chips are the lifeblood of the modern information age.
- They enable electronic products to compute and control actions that simplify our lives.
- These semiconductor chips are the drivers for ICT (Information and Communication Technologies) development and one of the key reasons for the current flattening of the world.
- They are used in critical infrastructures such as communication, power transmission, etc., that have implications for national security.
- Development of the semiconductor and display ecosystem will have a **multiplier effect** across different sectors of the economy with deeper integration to the global value chain.

INDIA'S FIRST SEMICONDUCTOR FABRICATION PLANT

The Union Cabinet has **approved three chip-related projects,** including India's first semiconductor fabrication plant. The three projects are listed as under:

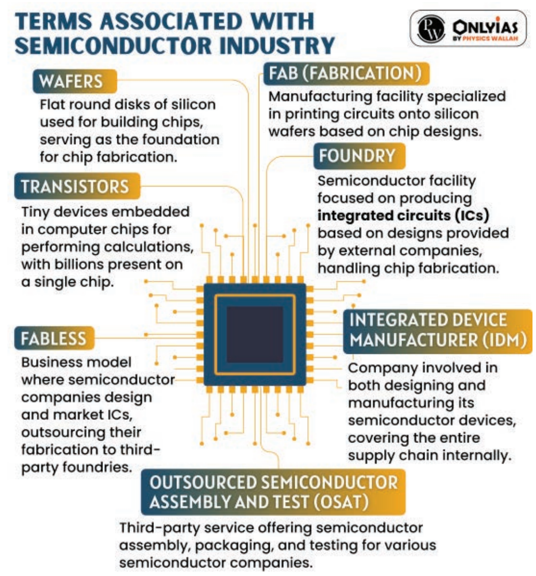
- **Semiconductor Plant in Dholera, Gujarat:**
  - The semiconductor plant is a collaboration between Tata Group and Taiwanese foundry Powerchip Semiconductor Manufacturing Corp (PSMC).

- It will provide access to leading-edge and **mature nodes including 28 nanometer, 40 nm, 55 nm, 90 nm and 110 nm.**
- Capacity of **50,000 wafers per month.**

- **Chip Assembly plant in Morigaon, Assam: The Tata Group will also set up a chip assembly plant** with a capacity to manufacture **48 million chips per day**, and will primarily cater to export needs.
- **Chip Packaging Facility in Sanand, Gujarat:** A chip packaging facility in Gujarat's Sanand was also approved by the Cabinet.

About Semiconductors:

- **Semiconductors, often called 'chips,' are tiny electronic circuits containing transistors, diodes, capacitors, resistors, and interconnections.**
  - These circuits are intricately arranged on a silicon wafer.
  - Semiconductors are employed in the manufacture of various kinds of electronic devices, including diodes, transistors, and integrated circuits. Such devices have found wide application because of their compactness, reliability, power efficiency, and low cost.



Government Initiatives:

- **National Policy on Electronics (NPE):** India has launched the National Policy on Electronics (NPE) in 2019, with the aim of creating a globally competitive electronics manufacturing industry in the country.
- **Semicon India Program:** The Union Cabinet had also approved the Semicon India Program, with an outlay of INR 76,000 crore for the development of a sustainable semiconductor and display manufacturing ecosystem in India.
- **About India Semiconductor Mission (ISM):**
  - ISM was launched in 2021 under the aegis of the Ministry of Electronics and IT (MeitY) for the development of a sustainable semiconductor and display ecosystem in the country.
- **Foreign Direct Investment (FDI) Norms:** 100% FDI is allowed under the automatic route.
- The **"Make in India"** campaign and the **Electronics Manufacturing Cluster (EMC)** scheme aim to attract investments and promote semiconductor manufacturing in the country.

SIGNIFICANCE OF SEMICONDUCTOR FABRICATION PLANT:

- **Reducing Dependence on Imports:** With 70% of global semiconductor manufacturing concentrated in South Korea, Taiwan, and China, India can enhance self-sufficiency by establishing its own fab.
- **Balancing Trade Deficits:** India faces a significant trade deficit in semiconductor products, mainly imported from China, Hong Kong, and Singapore.
- **Intricate Fabrication Process:** Semiconductor fabrication involves complex steps, necessitating clean rooms and inputs like silicon wafers. A domestic fab ensures control over critical components.
- **Boosting Manufacturing Sector:** A domestic fab with a capacity of 50,000 wafers per month can supply components for future technologies, boosting the manufacturing sector.
- Creating Job Opportunities: It has the potential to create 20,000 direct and 60,000 indirect high-tech jobs.
- **Resilience in Global Supply Chain:** Diversifying manufacturing strengthens the global semiconductor supply chain, as seen in China's challenges with SMIC due to US restrictions.
- **Spillover Effects:** Semiconductor manufacturing fosters spillover effects in India's high-tech economy through learning by doing.

CHALLENGES IN BOOSTING DOMESTIC SEMICONDUCTOR SECTOR:

- **Lack of Fabrication Units:** Despite having R&D and design centres, India lacks semiconductor fabrication units, with existing fabs limited to strategic purposes.
- **Resource-Intensive Chip Production:** Chip manufacturing demands vast amounts of ultrapure water and stable power supply, with any disruptions causing significant losses.
- **Lack of Engagement from Market Players:** Complex application processes and absence of a supportive ecosystem deter market players from establishing fabs, as seen in India's underwhelming response to a $10 billion incentive program.

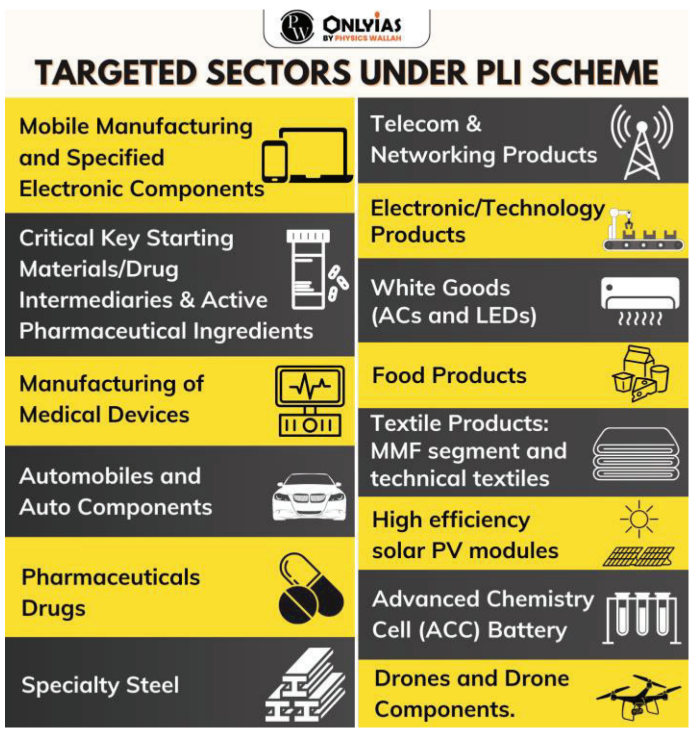
- **Closed Ecosystem:** The global semiconductor industry is dominated by a few countries and companies, particularly Taiwan and South Korea, limiting competition.
- **Insufficient Talent Pool:** While India produces many engineers annually, inadequate training and preparedness hinder their industry readiness.
- **Limited Original Research:** Original research is vital for chip development, and efforts are underway to bolster research capabilities at institutions like the Semiconductor Laboratory in Mohali.
- **Multiple Clearances Needed:** Establishing fabs with advanced technology requires clearances from technology providers and government agencies, adding to the complexity of the process.

WAY FORWARD

- **Conducive Environment:** India has the potential to play a much more significant role in global semiconductor value chains, provided the government upholds its **investment policies, maintains a conducive regulatory and business environment, and avoids measures that create unpredictability.**
- **Changing the Focus towards OSAT:** Companies that specialise in **Outsourced Semiconductor Assembly and Test (OSAT) are less expensive to set up, and generate better margins.** The OSAT set-ups take care of the less capital-intensive parts of chipmaking, such as assembling the precise components that have already been manufactured, and running specialised tests to approve them.
- **Collaborative Efforts:** If like-minded nations **each specialise in different aspects of the semiconductor and electronics manufacturing process, and work together on assembly and distribution**, that can also solve the geopolitical problem of Chinese dominance.
- **Focus on Design and Research and Development:** The initial funding should focus on areas like **design and R&D, for which India already has an established talent pool.**
- **Utilize Multilateral Partnerships:** Engage in multilateral collaboration, particularly through initiatives like the Quad Semiconductor Supply Chain Initiative, to access vital technologies and resources.

PRODUCTION LINKED INCENTIVE SCHEME

The Government has granted **approval to 27 companies,** including Dell, HP, and Foxconn, under the **new production-linked incentive (PLI) scheme for IT hardware. Scheme coverage:** It covers laptops, tablets, all-in-one PCs, Servers and Ultra Small Form Factor devices.



- **Employment Potential:** Around 50,000 direct employment opportunities and 150,000 indirect employment opportunities.
- **Boosting IT hardware production:** The sector in India is expected to grow from $15.52 billion in 2022 to $22.77 billion in 2027.

ABOUT PRODUCTION-LINKED INCENTIVE (PLI) SCHEME:

- **Objective:** To attract investments in key sectors and cutting-edge technology; ensure efficiency and bring economies of size and scale in the manufacturing sector.
- **Reliance on Import Substitution:** It aims to generate more employment and cut down the country's reliance on imports.
- **Incentives for Production:** It aims to give companies incentives on incremental sales from products manufactured in domestic units.
  - It provides a **subsidy of 4% to 6% based on incremental sales of products** manufactured domestically and are disbursed over a specified period.
  - **Incentives are not guaranteed** and are released **based on annual performance** and meeting stipulated criteria in the respective Scheme Guidelines.

Need for the Scheme:

- **Structural challenge of Indian Economy:** India has faced challenges in increasing the share of the secondary sector, including manufacturing, in its GDP.
- **Limited Growth:** Despite the introduction of pro-business reforms under the New Economic Policies in 1991, the growth has been limited. The manufacturing sector has remained at around **17% of the GDP.**

CHALLENGES WITH THE SCHEME:

- **Subsidy for Finishing Rather Value Addition:** Under the scheme, the subsidy is paid only for finishing the product in India, not on how much value is added by manufacturing in India.
- **Lack of Centralised Database:** The absence of a database that records information such as production growth, export figures, and the creation of new jobs **complicates the evaluation process creating an administrative challenge.**
- **Biases Towards Large Firms:** Most of the industries under the PLI scheme are either large or medium-sized units. The scheme's focus on providing subsidies to selected large and medium-scale industries is a sub-optimal policy.
- **One size Fits All Approach:** The scheme **lacks sector-specific considerations** neglecting the **diverse needs and complexities of industries,**and thus, **inadequately addressing the inefficiencies and limitations of different industries.**
- **Overlooking Global Dynamics:** The efficacy of production subsidies to galvanise sector-specific manufacturing depend on a combination of factors. Ex- Steady stock of raw materials available at competitive prices, size of the domestic market, etc.
    - PLI extension to the container manufacturing industry **neglected the prevailing dynamics in India and that of the global container manufacturing business.**
    - Around 80 per cent of the total cost of production of these containers is composed of a single raw material called Corten steel and the price of which is ₹120-130 per kg in India, as compared to ₹80-90 in China.
    - The **high cost of primary input makes the sector uncompetitive, limiting its ability to compete in the global market.**

WAY FORWARD:

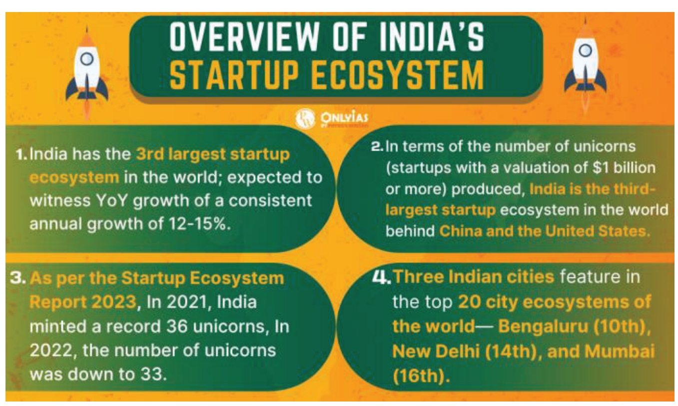
- **Value Addition as a Condition for Incentives:** Incentivising production of components and not the final product is needed for effectiveness of the scheme.
- **Diversification of Sectors:** Expanding the scope of the scheme to encompass more industries, including sunrise sectors and technology-driven fields, can further boost domestic manufacturing and innovation.
- **Removing Investment Criteria:** The companies argue that the investment criteria have acted as a barrier to entry into the scheme.
- **Monitoring and Evaluation:** Continuous monitoring and evaluation of the scheme's impact on job creation, export promotion, and manufacturing growth are crucial. This data can be used to make necessary adjustments and improvements.
- **Infrastructure Development:** To support the manufacturing sectors, the government should invest in infrastructure development, including transportation, logistics, and energy supply.

STARTUP ECOSYSTEM IN INDIA

Context:

The 182nd report **on 'Ecosystem of Startups to benefit India'** was tabled by the Department Related Parliamentary Standing Committee on Commerce.

- Despite potential, **only 5.18% of startups are agri-focused**. Parliamentary Panel has raised concerns and calls to push funding & mentoring.
- Only 10,165, or **9.4%, of the 98,119 recognised start-ups** have even applied for the tax sops.
- **Just 1% of the more than 98,000 start-ups** recognised by the Commerce and Industry Ministry have been able to avail Income Tax exemptions six years after the sop was announced.



- **Rs. 75.25 crore** has been extended to nearly **1,176 agri-startups under the Rashtriya Krishi Vikas Yojana (RKVY) initiative**, focusing on a spectrum of domains including precision agriculture, agro-processing, post-harvest technologies, and more.

ABOUT START UP:

- In India, A startup is defined as an **entity that is headquartered in India**, which was opened l**ess than 10 years ago, and has an annual turnover less than ₹100 crore.**
- Startups often rely on a **combination of personal savings, crowdfunding, angel investors**, and **venture capital** to finance their growth.
- They are typically funded through **bootstrapping, venture capital,** or other means.

Know the terms:
- **Bootstrapping:** Funding a startup's operations **using personal savings**, revenue generated by the business, and minimal external investment.
- **Venture Capital (VC):** Funding **provided by investors to early-stage startup**s with high growth potential in exchange for equity or ownership in the company.
- **Angel Investor:** Angel investors **are wealthy private investors** focused on financing small business ventures in exchange for equity.

ROLE OF STARTUPS IN THE GROWTH OF THE INDIAN ECONOMY:

- **Employment Creation:** India has **112 million working-age peopl**e between the ages of 20 and 24, compared to China's 94 million.
  - In the absence of government jobs, this demographic dividend is accelerating the country's startup culture.
- **New Investments:** Many multinational corporations are closely monitoring the progress of Indian start-ups to invest their money.
  - **Ex:** Accenture gave 1.35 million dollars worth of business to startups in 2021.
- **Research and Development (R&D):** Start-ups **heavily subsidize R&D** in countries like India as they frequently have to deal with high-tech and knowledge-based services.
- **Democratizing the Technology Benefits:** Fintech startups are now reaching out to remote areas with their solutions and making financial solutions easily accessible in tier 2 and tier 3 cities.
  - **For Example:** Hesa, a Fintech and Agritech startup is one solution for all rural problems by bridging the rural-urban divide with technology and labor.

STARTUP BUSINESS:

Pros	Cons
Innovation: Innovative mindset often sets startups apart and can create a significant competitive advantage.	**High Failure Rate:** According to an estimate, up to 90% of startups fail due to inadequate business planning, or market demand for the product etc.
Potential for High Growth: A successful startup can also bring financial rewards to the founders and investors.	**Financial risk:** Starting a startup requires a significant investment, and there is no guarantee of success.
Flexibility: Startups often have a lean organizational structure, allowing for more flexibility in how work is done. This can lead to a more agile and adaptable business.	**Uncertainty:** Startups often face uncertainty in their early stages, including uncertainty around market demand, product-market fit, and competition. This can make it challenging to plan and make decisions.

GOVERNMENT INITIATIVES TO STRENGTHEN THE STARTUP ECOSYSTEM:

- **"Startup India"**: To build a strong and inclusive ecosystem for innovation and entrepreneurship.
- **Faster Exit for Startups:** Wind up operations within 90 days vis-a-vis 180 days for other companies.
- **Startup India Hub:** Platforms for all stakeholders of the entrepreneurial ecosystem.
- **Startup India Seed Fund Scheme (SISFS):** Financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialization.
- **Credit Guarantee Scheme for Startups (CGSS):** To provide guarantee up to a specified limit against loans extended by Member Institutions (MIs).
- **Support for Intellectual Property Protection (SIPP):** It facilitates the startups to file applications for patents, designs and trademarks through registered facilitators in appropriate IP offices by paying only the statutory fees.
- **States' Startup Ranking:** It is released by **Department for Promotion of Industry and Internal Trade (DPIIT)** that evaluates all of India's states and UTs on their efforts to build an ecosystem conducive to startup growth.

CHALLENGES OF INDIA'S STARTUP ECOSYSTEM:

- **Heavily Concentrated Funding:** The three clusters Bengaluru, Delhi NCR, and Mumbai accounted for 92% of all the funds raised between 2018 and 2020, 1% higher than their share in 2015–18.
- **Lack of Women Participation: Only three** of the top 20 Indian venture capital firms **had a woman partner** as of February 2020 (Dalal & Sriram, 2020).
  - As per a recent report by **Innoven Capital, less than 50% of the surveyed startups** had more than 10% women in leadership positions (InnoVen Capital India, 2020).
- **Limited Geographical Spread:** India has three main startup clusters—**Bengaluru, Delhi National Capital Region (NCR),** and **Mumbai.**
  - **For Example:** As of **13 September 2021,** India had **75 unicorns** , 83% of which (62) were from these three clusters.
- **Regulatory Hurdles:** Complex and arachaic regulations can create obstacles for startups, making it difficult to navigate legal processes, compliance requirements, and approvals.
- **Access to Funding:** At times, securing adequate funding can be challenging for startups, especially those in early stages. Access to venture capital, angel investments, and other funding sources can be limited.
- **Market Readiness:** Startups need to understand local consumer behavior, preferences, and cultural nuances to succeed.
- **Lack of Mentorship:** Startups often lack experienced mentors who can provide guidance, insights, and connections to help navigate challenges and make informed decisions.
- **Intellectual Property Protection:** Intellectual property rights enforcement can be complex and time-consuming, which can discourage startups from investing in research and development.

WAY FORWARD:

- **Integrate Academia & Innovation To Encourage Entrepreneurship:** It will encourage innovations, ideas of young students and provide a conducive environment for entrepreneurship.
- **Innovation Zones:** The Government should encourage **establishment of Innovation Zones** in Urban Local Bodies (ULBs) to encourage entrepreneurship.
- **Promote 'Vocal for local':** It is vital to creating an ecosystem where Indian entrepreneurs and startups are incentivised to **ideate, incubate, build, nurture and sustain** tech solutions that can serve not only citizens within India but also the world.
- **Establish New Incubators And Accelerators:** Incubators play a vital role in nurturing and inculcating the entrepreneurial culture among the aspiring entrepreneurs and promote them to be job providers.

INDUSTRIAL REVOLUTION 4.0

- Industrial Revolution 4.0 (IR 4.0) is the name given to the current trend of automation, interconnectivity and data exchange in manufacturing technologies to increase productivity.
- Recently, Prime Minister Narendra Modi gave an institutional shape to the expression, by launching the center for the 4th Industrial Revolution - which is an initiative of the World Economic Forum. With this, India is about to embark on a massive digital and technological transformation.

Revolutions	Time period	Remarks
First	**18th to 19th centuries**	Development of Iron, textile industries and steam engines
Second	**1870 – 1914**	Invention of new things like Telephones, light bulbs and internal combustion engines.
Third	**Ongoing since 1980s**	Advancement of technology with electronic and mechanical devices to digital technology, personal computers, internet, etc.
Fourth	**Phrase first used in 2016**	It includes emerging technologies like robotics, artificial intelligence, quantum computing, biotechnology, Internet of Things (IoT), 3D printing, etc. It merges physical, digital and biological spheres.

KEY ELEMENTS OF INDUSTRIAL REVOLUTION 4.0

- **Fusion of Multiple Technology**: The key elements of the fourth revolution are the **fusion of technologies** ranging from the physical, digital to biological spheres.
- **Cyber-Physical Systems**: It is a complex Cyber-Physical Systems which synergizes production with digital technologies, the Internet of Things, Artificial Intelligence, Big Data & Analytics, Machine Learning and Cloud Computing.
- **A Technological Age**: The Fourth Industrial Revolution is a term that describes the technological age.
- **New Center in India**: Prime Minister of India gave an institutional shape to the expression by launching the Centre for Fourth Industrial Revolution in India.

INDIA AND INDUSTRIAL REVOLUTION 4.0

- **Poverty Alleviation:** AI has significant potential in reducing poverty through various applications.
- **Low-Cost Healthcare:** AI-driven diagnostics, personalized treatment, pandemic detection, and imaging diagnostics can improve healthcare affordability.
- **Increasing Farmers' Income:** Providing farmers with advanced technologies for real-time advisory, pest detection, and price prediction can boost crop yields and income.
- **Empowering Differently Abled Individuals:** AI offers opportunities for empowerment and enablement of specially-abled individuals.
- **Ease of Living:** Smart technologies driven by AI can enhance quality of life and business operations, fostering ease of living and doing business.

IMPACT OF THE INDUSTRIAL REVOLUTION 4.0

Positive Impacts	Negative Impacts
• **Increased Productivity:** Implementation of Industrial Revolution 4.0 will lead to the increase productivity in the overall economy with seamless automation. • **IT Security:** With new understanding in various systems, mechanisms and security standardization will help to better secure the information technology system in the world using new tools. • **Machine Safety and Better Working Conditions**: It will vastly improve the automation in various industries that will reduce the hazardous job for workers in various industries. • **Strengthening Infrastructure, Improving Connectivity:** New tools developed by the Strengthening infrastructure will improve the connectivity. This will be implemented in the administrative and physical system that will help to reduce human induced errors.	• **Segregated Job Market:** It will give rise to a job market increasingly segregated into low-skill/low-pay and high-skill/high-pay segments leading to an increase in social tensions. • **Effect on Identity:** It will affect the identity and all the issues associated like the sense of privacy, notions of ownership, consumption patterns, developing careers and cultivating skills. • **Increase Inequality:** Inequality represents the greatest societal concern associated with the Fourth Industrial Revolution. • **Rising Gap in Wealth:** The largest beneficiaries of innovation tend to be the providers of intellectual and physical capital, the innovators, shareholders, and investors which explains the rising gap in wealth between those dependent on capital versus labour. • **Reduced Employment:** The net displacement of workers by machines might exacerbate the gap between returns to capital and returns to labour.

WAY FORWARD

- **Gender Equality:** Strengthen women's leadership and voice, eradicate workplace violence and harassment, and implement pay transparency policies to ensure gender equality.
- **Protection for Vulnerable Groups:** Provide social protection from birth to old age to support individuals' needs across their lifespan, especially for vulnerable groups.
- **Institutional Support for Transition:** Increase investments in institutions, policies, and strategies to assist people through transitions in the future of work.
- **Human-Centric Economic Model:** Consider distributional aspects of growth, value unpaid work, and address externalities like environmental degradation for a people-centered business and economic model.
- **Rules and Regulations:** Establish international governance systems, including digital labor platforms, to safeguard workers' minimum rights in the digital economy.
- **Labor Guarantee:** Advocate for a universal labor guarantee worldwide to protect workers' fundamental rights, ensure a living wage, limit work hours, and ensure safe workplaces.

- **Shift in Learning Paradigm:** Offer universal entitlement to lifelong learning, enabling individuals to acquire and update skills through reskilling and upskilling initiatives.

MAKING INDIA A MANUFACTURING HUB

- The 'Make in India' project was introduced by the Indian government in 2014 as part of a new manufacturing-focused strategy for the country. To support manufacturing, design, innovation, and startups in India, a number of reforms were implemented.
- As part of its claimed objective of making India economically independent, the **"Atma Nirbhar Bharat"** programme, which was launched in 2020, was also designed to further stimulate domestic manufacturing.
- Given its demographic dividend and relatively inexpensive labour, India has enormous potential and potential in the industrial sector. Larger investments, personnel upskilling, and infrastructure improvement are a few of the areas where more work has to be done.

OVERVIEW OF INDIA'S MANUFACTURING SECTOR

- **Economic Multiplier Effect:** Manufacturing is a key economic activity contributing positively to the economy's value addition, ranking India's industrial sector fifth globally.
- **Employment Generation:** The manufacturing sector accounts for approximately 39% of jobs created across nine selected sectors, as per the Union Ministry of Labour's Quarterly Employment Survey (2021).
- **Contribution to GDP:** MSME Gross Value Added (GVA) constituted 30.5% and 30.0% of India's Gross Domestic Product (GDP) in 2018-19 and 2019-20 respectively, reflecting the sector's significant contribution.
- **Abundant Human Capital:** India benefits from a vast pool of skilled human resources, providing firms engaged in industrial activities a competitive advantage across various skill levels.
- **Manufacturing Leadership:** India has established leadership in certain industries such as apparel, textiles, pharmaceuticals, petroleum products, and automobiles.
- **Export Potential:** Despite achievements, the manufacturing sector needs to enhance competitiveness to match the success of India's service exports, indicating room for growth and improvement

DRIVING FORCES FOR MANUFACTURING GROWTH IN INDIA

- **Infrastructure Projects:** The National Infrastructure Pipeline (NIP) spanning fiscal years 2019–20 to 2024–25, aims to boost infrastructure development across the nation.
- **Integrated Development:** The National Industrial Corridor Development Programme fosters the integrated growth of industrial smart cities with plug-and-play infrastructure and multi-modal connectivity.
- **Atma Nirbhar Bharat:** Introduction of Production-Linked Incentive (PLI) programs since 2020 incentivizes various industries, promoting manufacturing and fostering self-reliance.
- **Warehouse Development:** Manufacturing within warehouses enhances global supply chain efficiency, aiding MSMEs in global market positioning and conserving working capital.
- **Customs Rules:** Legislative measures like the periodically revised Customs (Import of Goods at Concessional Rate of Duty) Rules stimulate domestic production, adapting to evolving business needs and industry demands.

THE BONDED MANUFACTURING SCHEME: WHAT IS IT?

- Central Board of Indirect Taxes and Customs has launched a revamped and streamlined programme to attract investments into India and strengthen Make in India through manufacture and other operations under bond scheme, under Customs Act, 1962.
- **Section 65** of the Customs Act, 1962 enables conduct of **manufacture and other operations in a customs bonded warehouse.**
- The scheme is expected to play a critical role in **promoting investments in India** and in enhancing ease of doing business.

CHALLENGES FACED BY THE MANUFACTURING SECTOR

- **Certification Issues:** Lack of certified factories poses a challenge as global businesses increasingly prefer goods from ISO- or BSI-certified facilities, unlike in China where most manufacturers adhere to these standards. Finding similarly certified businesses in India can be difficult, with many failing to meet even minimal inspection requirements.
- **Underdeveloped Manufacturing Sector:** Unlike China's focus on transitioning to advanced sectors like robotics and aerospace through initiatives like **"Made in China 2025,"** India still relies heavily on traditional, labor-intensive manufacturing. This hampers efforts to generate millions of new jobs urgently needed for economic growth.

- **Weak Infrastructure:** India's manufacturing industry is hindered by inadequate infrastructure compared to China, with only 3% of GDP allocated for infrastructure development annually, as opposed to China's 20%. Insufficient power supply exacerbates this problem.
- **Impact of Government Schemes:** Manufacturing-related schemes often rely heavily on international markets for production and foreign investment, creating uncertainty as domestic production aligns with global demand. Moreover, policymakers overlook implementation challenges, exacerbating economic deficits.

STEPS TO IMPROVE INDIA'S MANUFACTURING SECTOR

- **Investments in Infrastructure:** A multi-pronged strategy should be used to promote manufacturing, with a major emphasis on significant infrastructure expenditures because they will generate a lot of development potential on their own.
- **Interventions in Policy:** The establishment of policies to improve worker skills and expand access to capital for its businesses must be the final conceptual component of India's manufacturing strategy.
- **Judicious Import Policy**: By using import policy wisely, the nation's production can be governed with the aim of increasing employment in the economy. The domestic surplus produced by the nation's manufacturing capacity can also be used to enhance exports to foreign markets, which are made easier by customs.
- **Policy Implementation:** "Policy casualness" is the flurry of policy statements without the ability to put them into action. The effects of the implementation deficit must be considered by the government when making choices.
- **Stable Power Supply:** To encourage the development of the industries, stable, affordable, and uninterrupted power is essential. Although the availability of power has significantly increased, India must quickly secure this at the industrial level in order to benefit from the expansion of manufacturing.
- **Specific State Plans:** Currently, a small number of states, like Gujarat and Maharashtra, which make up a sizable amount of India's territory, are the primary centres of manufacturing. Large geographical tracts in states like Andhra Pradesh, Bihar, Chhattisgarh, Madhya Pradesh, Chhattisgarh, Madhya Pradesh, Odisha, Rajasthan, Telangana, and West Bengal can also add to the success stories of Indian manufacturing.
- **Transferring Skill:** It is necessary to raise the standard of instruction in schools and institutions. The educational system must offer the top-notch vocational training.

CONCLUSION

It can enable the 'Make in India' programme, encourage exports, create hubs for electronics assembly, repair & refurbishment operations, inward and outward processing, facilitate global e-commerce hubs etc.

SPECIAL ECONOMIC ZONES (SEZS)

- In the past three years, the performance of Special Economic Zones (SEZ) in terms of exports, investments, and employment has reached new heights.
- An SEZ is a region inside a nation that often has separate business and commercial rules designed primarily to promote investment and generate employment. It is typically duty-free (Fiscal Concession).
- SEZs are developed in order to manage these areas more effectively and improve business accessibility.

SEZS IN INDIA

Kandla, (Gujarat), became Asia's first export processing zone (EPZ) in 1965. To improve upon EPZ shortcomings, India introduced Special Economic Zones (SEZs) in 2000, with the SEZ Act enacted in 2005 and rules in 2006. Currently, 265 of 379 notified SEZs are operational, mainly in southern states. In 2018, a committee reviewed SEZ policies for WTO alignment and efficiency.

MAJOR FACILITIES AND INCENTIVES FOR SEZ

- Duty-free imports and domestic purchases of products are permitted for the construction, use, and upkeep of SEZ units.
- Exemption from a variety of taxes, including the minimum alternate tax and the income tax.
- Through reputable banking channels, SEZ units may borrow up to US$500 million in external commercial debt each year without any maturity restrictions.
- Approvals at the central and state levels through a single portal.

CHALLENGES

- **Unused Land in SEZs:** As a result of the pandemic's interruptions and a lack of demand for SEZ space.
- **Existence of Multiple Models:** There are various economic zone models, including SEZs, coastal economic zones, the Delhi-Mumbai Industrial Corridor, National Investment and Manufacturing Zones, food parks, and textile parks, which make it difficult to integrate the different models.

- **Competition from ASEAN Countries:** Over the past few years, many ASEAN nations have made changes to their policies to draw in foreign investors to their special economic zones (SEZs) and have also pushed to further a number of their skill-building initiatives.
- As a result, Indian SEZs have lost some of their worldwide competitive advantages and require newer rules.

WAY AHEAD

- One of the proposals made by the **Baba Kalyani Committee** on SEZs is to encourage MSME investments in SEZs by partnering with MSME initiatives and allowing other sectors to invest in sector-specific SEZs.
- In order to increase SEZs' access to financing and enable long-term borrowing, it had also argued for new enablers and procedural leniencies as well as giving them infrastructure status.

CONCLUSION:

- **Economic Growth:** The industrial sector contributes significantly to India's GDP, fostering economic growth and job creation.
- **Technological Advancements:** Industries drive innovation, technological progress, and infrastructure development.
- **Export Potential:** India's industrial exports, including textiles, automobiles, and pharmaceuticals, boost foreign exchange earnings.

Key Words: Automation, Vocal for Local Initiative, Gender Equality, Productivity-Connectivity-infrastructure, Sustainability and Resilience, Social Progress and Shared Prosperity, Judicious Import Policy, The Bonded Manufacturing Scheme, Global demand and supply dynamics, Atma Nirbhar Bharat, Demographic Dividend, Developed and Underdeveloped Manufacturing Sector, The competitiveness paradigm, Exclusive Economic Zone, Special Economic Zones, Corporate Social Responsibility, Corporate Governance, Insider trading, District Resource Persons (DRPs), Entrepreneurship Development Skilling (EDP+), Credit-linked Capital Subsidy, Micro Businesses, Interconnectivity and Data exchange in Manufacturing Technologies.

Previous Years Questions		
1.	Faster economic growth requires increased share of the manufacturing sector in GDP, particularly of MSMEs. Comment on the present policies of the Government in this regard.	2023
2.	Account for failure of the manufacturing sector in achieving the goal of labour intensive exports. Suggest measures for more labour-intensive rather than capital intensive exports.	2017
3.	"Industrial growth rate has lagged behind in the overall growth of Gross-Domestic-Product (GDP) in the post-reform period" Give reasons. How far are the recent changes in Industrial Policy capable of increasing the industrial growth rate?	2017
4.	There is a clear acknowledgement that Special Economic Zones (SEZs) are a tool of Industrial development, manufacturing and exports. Recognising this potential, the whole instrumentality of SEZs requires augmentation. Discuss the issues plaguing the success of SEZs with respect to taxation, governing laws and administration.	2015
5.	Normally countries shift from agriculture to industry and then later to services, but India shifted directly from agriculture to services. What are the reasons for the huge growth of services vis-a-vis industry in the country? Can India become a developed country without a strong industrial base?	2014
6.	Foreign direct investment in the defence sector is now said to be liberalised. What influence is this expected to have on Indian defence and economy in the short and long run?	2014
7.	Discuss the impact of FDI entry into the multi-trade retail sector on supply chain management in commodity trade patterns of the economy.	2013
8.	Though India allowed foreign direct investment (FDI) in what is called multi brand retail through joint venture route in September 2012, the FDI even after a year, has not picked up. Discuss the reasons.	2013

13 SERVICES

INTRODUCTION

The economy's service sector, sometimes referred to as the tertiary sector, is made up of a broad spectrum of intangible goods and services. Information technology, banking, insurance, healthcare, education, hospitality, and entertainment are a few examples of service sector activities.

The services sector's compound annual growth rate has consistently risen over the decades, from 6.2% during the 1980s to 7.5% during the 1990s and further to 8.5% during the 2010-15 period, exceeding overall GDP growth throughout.

It witnessed a swift rebound in FY22 driven by growth in the contact-intensive services sub-sector, which bore the maximum burden of the pandemic. This subsector completely recovered to the pre-pandemic level in Q2 of FY23, driven by the release of pent-up demand, ease of mobility restriction, and near-universal vaccination coverage.

OVERALL PERFORMANCE

- India's service sector is the second fastest-growing sector in the world after China.
- The share of the service sector in total GVA is 53.89%.
- 31.02 % in 2022 of India's workforce is employed in the service sector.
- It is the largest receiver of FDI. The service sector accounts for about 60% of all FDI inflow.
- At the state and UT levels, Chandigarh has the highest service share in state GVA (Economic Survey 2021-22), followed by Delhi.
- India's share of global service exports is approximately 4.6% (2023).
- Service Exports remained resilient amid geopolitical uncertainties.

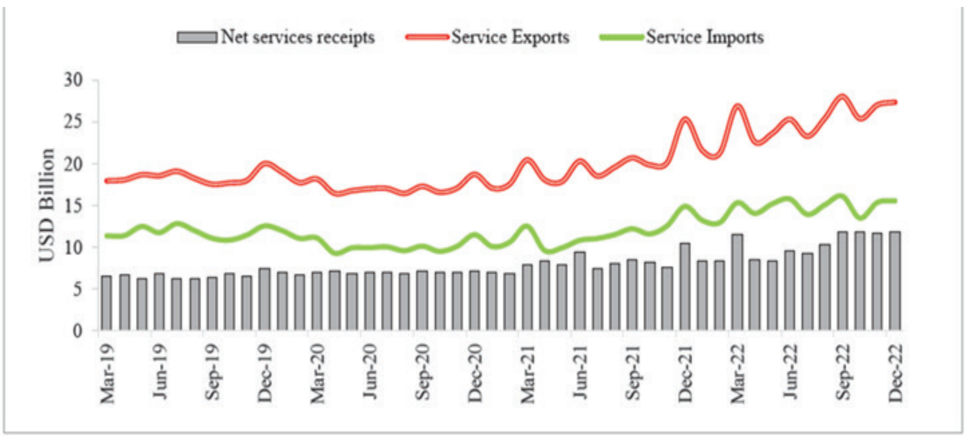


Figure 13.1: Service exports (Economic Survey 2022-23)

FOREIGN DIRECT INVESTMENT (FDI) IN SERVICES

- The World Investment Report 2023 of UNCTAD places India as the third largest recipient of FDI
- During FY 2022-23, FDI inflow of USD 71 billion (provisional figure) has been reported. During the current financial year, 2023-24 (up-to September 2023) FDI worth USD 33 billion has been reported including US$ 7.1 billion in FDI equity inflows in the services sector.
- To facilitate investment, various measures have been undertaken by the Government, such as the launch of the National Single-Window system, a one-stop solution for approvals and clearances needed by investors, entrepreneurs, and businesses.
- To ensure the liberalisation of investment in various industries, the Government has permitted 100 per cent foreign participation in telecommunication services, including all services and infrastructure providers, through the Automatic Route. The FDI ceiling in insurance companies was also raised from 49 to 74 per cent, under Automatic Route. Further, the Government has allowed 20 per cent foreign investment in Life Insurance Corporation (LIC) under the automatic route.

INDIA'S MULTILATERAL AND REGIONAL ENGAGEMENTS IN SERVICES

- India has actively participated in the WTO services negotiations. It has taken a proactive position in the services negotiations on temporary cross-border movement of service providers (mode 4) and cross-border supply of services (mode 1) under the General Agreement on Trade in Services (GATS).
- In the Doha round, India offered to exchange commitments on foreign commercial presence in return for market access in mode 1 and 4.
- India is not a participant in the Trade in Services Agreement (TISA), an agreement among 23 like-minded countries, which account for more than 70% of global trade.
- In 2017, India reinvigorated the services discussions by submitting a draft text to WTO on Trade Facilitation in Services (TFS), which aimed at addressing behind-the-border administrative and procedural barriers to services trade.
- India has increasingly turned towards signing bilateral and regional trade agreements as multilateral negotiations on services have slowed down. Examples include several comprehensive bilateral agreements with Japan and Malaysia in 2011, the expansion of the ASEAN-India FTA to include services and investment in 2015, etc.

SECTOR WISE PERFORMANCE

E-COMMERCE

The term pertains to the online purchase and sale of products and services. Electronic financial transfers, digital data exchanges, and online transactions are all involved. Currently, the Consumer Protection Act of 2019, the Information Technology Act of 2000, the Competition Act of 2002, and the FDI policy all regulate this industry.

General Data

- In terms of the global e-commerce market, India ranks sixth.
- With a 10-15% share of the Indian retail market, it is a sunrise sector.
- The Indian e-commerce market is expected to grow to US$188 billion by 2025 from US$ 46.2 Billion as of 2020. (World Bank)
- As the ecosystem matures, the mix of e-commerce is going to change. Fashion, grocery and general merchandise is going to capture nearly two-thirds of the Indian e-commerce market by 2027.

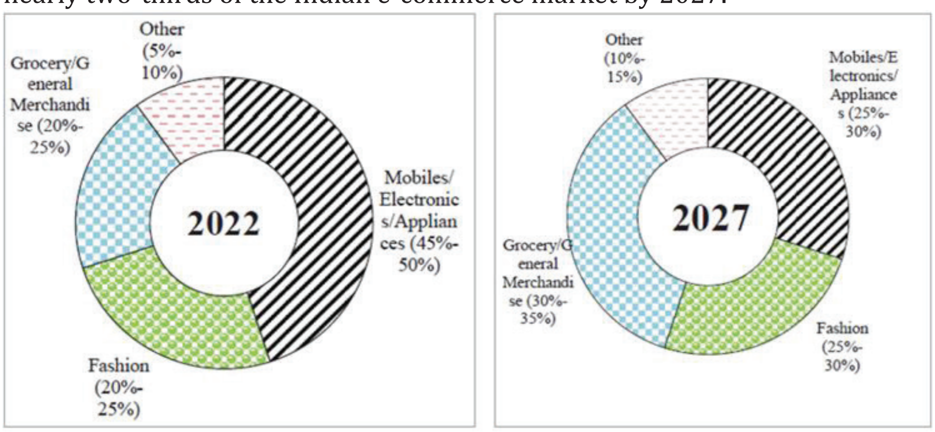


Figure 3:

- As per figure 3, Fashion, grocery, and general merchandise to nearly two-thirds of the Indian e-commerce market by 2027

Growth Drivers

- The E-Commerce sector witnessed a renewed push and a sharp increase in penetration in the aftermath of the pandemic. Lockdowns and mobility restrictions disrupted consumer behavior and gave an impetus to online shopping.
- The Government's push to boost the digital economy, growing internet penetration, rise in smartphone adoption, innovation in mobile technologies, and increased adoption of digital payments further accelerated the adoption and growth of e-commerce.
- The expansion of e-commerce to newer segments like grocery, fresh-to-home fruits and vegetables, and general merchandise has contributed to the expansion of the customer base beyond traditional buyers.
- Further, there has been a phenomenal geographical expansion with the growth of e-commerce business in rural India driven by increased smartphone penetration, internet adoption, and increased purchasing power of rural

customers. A vast untapped rural market holds the potential for strengthening consumption growth; new E-commerce companies like Trell, Meesho, and Shop 101, are expanding and gaining popularity in Tier 3 and 4 cities.

INITIATIVES TAKEN BY THE GOVERNMENT FOR THE PROMOTION OF E-COMMERCE SECTOR

Initiatives taken by the Government for the promotion of e-commerce, including the Digital India program, Unified Payment Interface (UPI), GeM, etc., have been major contributory factors to the growth of E-commerce in recent years. Various initiatives have also been taken to provide an opportunity to small retailers, manufacturers, and Self-Help Groups for greater outreach.

- **One District – One Product (ODOP)**
  - This is an initiative under the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry
  - It facilitates the onboarding of sellers of identified products on e-commerce platforms to provide greater visibility for small businesses from the rural sector.
- **Government e-Marketplace**
  - The initiative was launched in 2016 by the Ministry of Commerce and Industry. GeM 3.0 is the current version launched in 2018.
  - GeM helps government departments, organisations, and PSUs purchase common usage goods and services online.
  - Over 1.3 crore transactions have been made on GeM overall. (Upto 1 st Feb.,2023)
  - Research suggests that the platform has produced minimum savings of roughly 10%, which translates to savings of nearly ₹40,000 crore for the government.
- **www.tribesindia.com Portal**
  - Through this portal Tribal Cooperative Marketing Development Federation of India Limited (TRIFED) has been onboarding tribal artisans with their products for online sales, ensuring tribal products find a larger audience in the international market as well.
- **Open Network for Digital Commerce (ONDC)**
  - This recent initiative is also playing a significant role in democratising digital payments, enabling interoperability, and bringing down transaction costs. ONDC provides better market access to sellers and helps bring the country's remotest corners into the e-commerce framework by empowering them with digitization.
- **National e-commerce policy**
  - The government has put up a proposal for a national e-commerce policy that highlights the importance of streamlining regulations, improving technology, and effectively integrating supply chains.
  - **Key points about the proposed e-commerce policy**
    - The e-commerce policy will act as a sector-wide framework, guaranteeing consistency across different regulatory acts.
    - The marketplace model allows for 100% foreign direct investment (FDI), however the inventory-based model forbids FDI. The idea of creating a regulator just for the e-commerce industry is being explored.
    - India's potential for e-commerce exports is predicted to be between 200 billion and 300 billion USD a year by 2030. The policy acknowledges India's e-commerce sector's substantial export potential and aims to promote the same.
    - For uniformity, the e-commerce policy and the Consumer Protection (e-commerce) Rules 2020 will be aligned. The policy also intends to address the concerns of traders related to deep discounts and preference to select traders.

TOURISM SECTOR

GENERAL DATA

- India is the 8th largest tourist economy (World Travel and Tourism Council).
- A 2018 impact report by the World Travel & Tourism Council (WTTC) has revealed that India will become the third largest travel and tourism economy by 2028.
- Domestic travel accounts for 88% of the sector's contribution to GDP (MoSPI).
- As per the Global Travel and Tourism Development 2021 report, India dropped from 46th(2019) to 54th place in 2022.
- From 7% in 2019 to about 4.7% in 2020, the sector’s share of the nation’s GDP fell (MoSPI).

Key Targets

- India wants to become the **global leader** in tourism, with a target revenue of $1 trillion **by 2024.**

- Reach a **$250 billion** tourism-related GDP contribution **by 2030**.
- To increase India's proportion of **MICE** (Meetings, Incentives, Conferences, and Exhibition) **tourism** from its current level of about 1% to 2% in five years.
- Build **Brand India** for health and wellness travel.
- To make travel to India traveler-friendly by bringing in necessary interventions.

CHALLENGES IN THE GROWTH OF THE TOURISM INDUSTRY IN INDIA

- Lack of transportation facilities (e.g., there are no proper roads to connect to many locations in the Great Himalayas).
- Lack of proper accommodation facilities also hinders the prospects of tourism in a particular location.
- Overcrowding and overdevelopment in some tourist locations (eg: Shimla, Joshimath) have made the areas prone to a mix of natural and man-made disasters.
- Competition from other Asian countries like Singapore, Thailand, etc.
- Luxury tourism is heavily taxed, which obstructs it from reaching its potential.
  - the 28% GST rate is applicable to the supply of food/drinks in an air-conditioned restaurant in a 5-star or above-rated hotel.

MEDICAL TOURISM

The practice of people going to another country for medical treatment—often for procedures or services that may be more accessible, affordable, or of higher quality in the destination country is known as medical tourism.

- India is **ranked 10th out of 46** destinations worldwide in the **Medical Tourism Index** (MTI) for 2020–2021, according to the Medical Tourism Association.
- India's tourism industry is currently estimated to be worth $3 billion.
- India is a well-liked destination for medical tourism because of its top-notch hospitals, highly qualified medical staff, affordable treatment costs when compared to other nations, reputation in complementary and alternative medicine, and rising demand for wellness services like yoga and meditation worldwide.

ISSUES PERTAINING TO MEDICAL TOURISM IN INDIA

- The communication barrier poses a challenge for medical tourists.
- Variations in standards of medical services across India are also a problem.
- Medical tourism may face difficulties due to variations in ethical and legal norms among nations.
- Patients undergoing medical treatments in remote or less urbanised areas may encounter transportation and accessibility challenges.

INITIATIVES BY THE GOVERNMENT

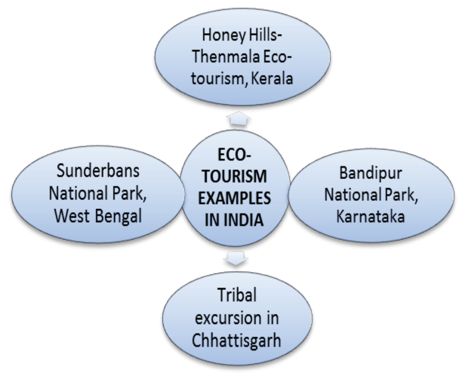
- For 156 countries, the "E-Medical Visa" and the "E-Medical Attendant Visa" have been introduced.
- Ayush Visa for tourist who desire to visit India for medical tourism
- Launch of National Strategy for Sustainable Tourism and Responsible traveller campaign.
- Heal in India initiative which aims to promote Medical Value Travel in the country, MoHFW, India has developed the Medical Value Travel Digital Portal for ease of foreign patients coming to India for treatment.
- Indiahealthtourism.com has been launched in three languages, i.e. Arabic, Russian, and French, by the Commerce Ministry in cooperation with the Ministry of Tourism and the Ministry of Health to provide comprehensive information to travellers.

WAY FORWARD

- The creation of health infrastructure and training health service providers is the need of the hour.
- Stress the value of providing exceptional customer service, which includes individualized attention and language support.
- Acquire and advertise globally acknowledged quality certifications for healthcare establishments to cultivate confidence and legitimacy among prospective clients.
- Work together with the regional travel industry to develop packages that combine travel and healthcare.
- Give prospective patients the chance to talk about their medical concerns via telemedicine consultations before they decide to book a trip.
- Share patient testimonials, success stories, and details about medical services on social media platforms.

IT/BUSINESS PROCESS MANAGEMENT (BPM)

The computer and information service segment has played a critical role in India's integration with the world economy and in placing India on the global service map. Today, it is the largest private-sector employer. The industry is highly export-oriented. Export earnings account for three-fourths of the industry's revenue.



RELATED DATA

- The share of the sector in GDP is 7.5 percent to the GDP of the country in fiscal year 2023. (MoSPI)
- IT services, business process management, hardware, software, and engineering services are the four subsectors.
- IT-BPM revenues registered YoY growth of 15.5 percent during FY22 compared to 2.1 percent growth in FY21, with all sub-sectors showing double-digit revenue growth. (Economic Survey 2022-23).
- Exports (including hardware) witnessed a growth of 17.2 percent in FY22 compared to 1.9 percent growth in FY21, owing to the increased reliance of businesses on technology, the roll-out of cost-reducing deals, and the use of core operations.
- The IT services segment accounts for about half of total revenue.
- USA contributes more than 60% of IT-BPM exports (NASSCOM)

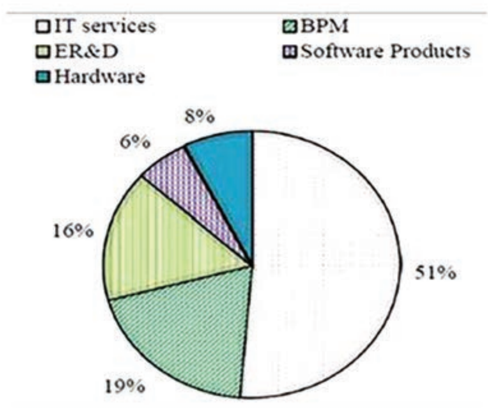


Figure 5: segment wise break up of revenue in FY22 (Economic Survey 2022-23)

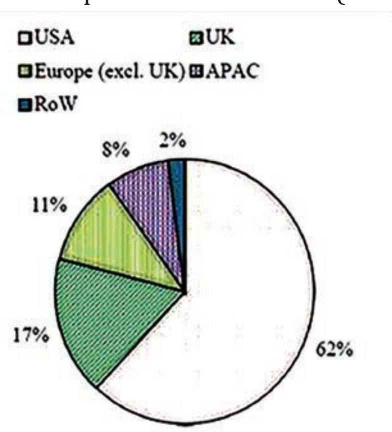


Figure 6: Geographical distribution of IT-BPM exports

MAJOR GROWTH DRIVERS IN THE IT-BPM INDUSTRY

- In India, the proportion of digital revenue as a percentage of total revenue has increased from around 26-28 percent in FY20 to 30-32 percent in FY22. In recent years, India has emerged as a global powerhouse for Engineering R&D.
- India has emerged as a digital talent nation. Employment across technology companies witnessed an increase with an uptrend in the digital talent base.

- The Indian tech industry led the adoption of hybrid work models to provide flexibility to their employees while maintaining operational efficiency.

INDIA BPO PROMOTION SCHEME

- The India BPO Promotion Scheme (IBPS) has been approved by the government as part of the **Digital India Programme**.
- It is under the **Ministry of IT and Electronics**.
- The **Software Technology Parks of India** (an autonomous society under Meity) is the **implementing agency**.
- Up to 50% of the cost of capital expenditures (CAPEX) and/or operational expenditures (OPEX) for approved items will be funded, with a cap of Rs. 1 lakh per BPO/ITeS seat.
- Unique rewards (Additional within the Rs. 1 lakh/seat upper cap)
    - 5% bonus for hiring 50% women
    - 7.5% incentive (exclusive to NEBPS) for hiring 75% women
    - 2% bonus for hiring 4% of people with disabilities
    - 10% incentive if employment exceeds target
    - 5% incentive for local business owners
    - 5% of the total amount if BPO is established somewhere other than the state capital (only for IBPS)
    - Incentive for regular employees to receive training.

COMMUNICATION SECTOR

Services related to communication are the different instruments, systems, and platforms that help people, organisations, or other entities share ideas, information, and messages. For example email services, telecommunication services, video conferencing etc.

TELECOM SECTOR

Related data

- The Indian telecom sector is 2nd largest in the world (TRAI).
- India is a country with the 2nd highest global internet subscriber count (TRAI).
- Overall tele-density is 82.46%. Urban tele-density stands at 133.81% and rural- tele density is 57.71% (TRAI).
- India has over 1.2 billion mobile phone users and 600 million smartphone users (Ministry of Information and Broadcasting).
- India is the 2nd largest smartphone market.
- With approximately 6% of all FDI inflow, it is the third largest sector in terms of FDI inflow (PIB).

Key Targets for the sector

- Ensure Digital Sovereignty.
- Increase industry contribution to 8% of India's GDP.
- Increase participation in the Global Value Chain.

Key Challenges faced by the sector

- Lack of internet penetration and telecom infrastructure in semi-rural and rural areas.
- Cut throat competition in the sector especially after the advent of Jio.
- Exorbitant spectrum usage fees in contrast to other nations.
- Available spectrum is way less than China (50% less) and European nations (40% less).
- There has been litigation over the definition of adjusted gross revenue (AGR) for the past 14 years.
- Cost of investment in 5G infrastructure.

Initiatives of the Government

- **National Digital Communication Policy 2018**
  Objectives (to be achieved by 2022)
    - Broadband for all,
    - Creating four million additional jobs in the Digital Communications sector,
    - Enhancing the contribution of the Digital Communications sector to 8% of India's GDP from ~ 6% in 2017,
    - Propelling India to the Top 50 Nations in the ICT Development Index of ITU from 134 in 2017,
    - Enhancing India's contribution to Global Value Chains and
    - Ensuring Digital Sovereignty.

Features

- Provide universal broadband connectivity at 50 Mbps to every citizen,
- Provide 1 Gbps connectivity to all Gram Panchayats by 2020 and 10 Gbps by 2022,

- Ensure connectivity to all uncovered areas,
- Attract investments of USD 100 billion in the Digital Communications Sector,
- Train one million manpower for building New Age Skill,
- Expand IoT ecosystem to 5 billion connected devices,
- Establish a comprehensive data protection regime for digital communications that safeguards the privacy, autonomy and choice of individuals,
- Facilitate India's effective participation in the global digital economy,
- Enforce accountability through appropriate institutional mechanisms to assure citizens of safe and Secure digital communications infrastructure and services.

- **Telecom Technology Fund**
  - The goal of TTDF is to create partnerships between academia, start-ups, research institutions, and industry to foster innovation in communication technology applications tailored to rural areas, with the ultimate goal of advancing the telecom ecosystem.
  - Under the scheme, Indian entities will receive grants to support and introduce indigenous technologies that are specifically designed to meet domestic needs.
- The Government has fixed the Auction Calendar to increase the certainty in the sector.
- There is a PLI scheme under Atmanirbhar Bharat Abhiyan for manufacturing of telecom and networking projects.
- Exclusion of non-telecom revenue from the definition of AGR.
- The telecom companies would be exempt from paying any spectrum usage charges for airwaves they win in upcoming auctions.
- **BharatNet Project**
  - It is the largest optical fiber-based rural broadband connectivity program in the world and a flagship project carried out by Bharat Broadband Network Ltd. (Special purpose vehicle under the Companies Act, 1957)
  - The Universal Service Obligation Fund is providing funding for the entire project (USOF)
  - Union Cabinet has approved a Viability Gap Funding support for the implementation of the BharatNet project through the Public-Private Partnership model.
- **PM WANI** (Wi-Fi Access Network Interface)
  - This will enable the establishment of public WiFi hotspots through public data offices (PDOs) across the nation.
  - The PDOs won't have to apply for a license or pay a fee.
- **5G**

  Initiatives taken by the Government
  - The government established a **5G High-Level Forum** in September 2017 to outline the country's 5G vision and provide legislative measures and implementation strategies to bring it to fruition.
  - DST and MEITY have also provided funding for a number of smaller university R&D projects centred on 5G issues.

  Intended benefits of 5G
  - Internet of things, and smart cities rely heavily on 5G technology.
  - In the future, smart farming and agriculture may benefit from 5G technology. Smart sensors can be used for irrigation control, access control, and energy management.
  - It will enable medical professionals to carry out cutting-edge medical procedures. Physicians can communicate with their patients at any time and from any location, offering advice as needed, thus promoting telehealth.
  - It will assist in industrial automation.

14 INFRASTRUCTURE: ENERGY, ROADS, RAILWAYS, PORTS & AVIATION

- Energy is a **critical aspect of the development process** of a nation. Beside industrial uses it is used widely in agriculture and related areas like production and transportation of fertilisers, pesticides and farm equipment.
- The government is aiming to achieve **energy independence by 2047**, i.e., before 100 years of independence.
- **The two major sources of energy can be classified under:**
  - Renewable Energy
  - Non-Renewable Energy

Facts and Data

- As per Indian Energy Outlook Report 2021, India is the 3rd largest primary energy consumer country of the world, released by the International Energy Agency.
- The Per Capita Electricity Consumption, which was a mere 16 units in 1947, has increased to 1255 units in 2021-22. It is around one-third of the global average of per capita energy consumption.
- Total installed power capacity up to April 2023 was 416.59 GW, of this a total of 178.79 GW of capacity from non-fossil fuel sources has been installed in the country. This has a share of 41.4 % of total installed generation capacity in the country.
- India stands 4th globally in Renewable Energy Installed Capacity (including Large Hydro), 4th in Wind Power capacity & 4th in Solar Power capacity (International Renewable Energy Agency - Renewable capacity statistics 2023)
- India has improved its rank to 67th position in the Energy Transition Index of WEF (2023 report).
- The Ministry of New and Renewable Energy is working towards achieving 500 GW of installed electricity capacity from non-fossil sources by 2030.

ISSUES AND CHALLENGES WITH THE ENERGY SECTOR OF INDIA

- **Coordination Challenges:** Multiple ministries and agencies lead to coordination issues and inefficient resource utilization.
- **Fossil Fuel Dependency:** Over 90% of India's primary energy supply relies on fossil fuels, with coal, oil, and biomass accounting for over 80% of electricity generation.
- **High AT&C Losses:** Aggregate Technical & Commercial (AT&C) losses reached 17% nationwide in 2021-22, indicating inefficiencies in transformation, transmission, and distribution.
- **State Discoms Financial Health:** State Discoms face financial strain due to populist tariff schemes, mounting AT&C losses, and operational inefficiencies, resulting in significant outstanding debts.
- **Policy Inconsistencies:** Micro-level policies often conflict with macro frameworks like The Electricity Act 2003 and the National Electricity Policy, leading to policy paralysis and inefficiencies.
- **Subsidies and Taxes:** Various subsidies and taxes distort the energy market, favoring inefficient fuels and hindering competitiveness, both domestically and in exports.
- **Coal Supply Gap:** Inadequate coal production fails to meet the demand from coal-based power plants, creating a supply-demand gap in the coal sector.
- **Tariff Issues:** Discoms face financial losses by supplying electricity at tariffs below the cost of supply, exacerbated by delays in tariff revisions.

GOVERNMENT INITIATIVES

- Programs like BEE-Star Rating and UJALA scheme aim to promote energy efficiency and provide affordable LED bulbs to consumers.
- Initiatives like SAUBHAGYA aim to electrify households and reduce discontinuous power supply.
- Agricultural consumers benefit from low tariffs due to direct state subsidies and cross-subsidization.
- Schemes like KUSUM encourage solar pump installations and surplus electricity sales to Discoms, providing additional income opportunities for farmers.

ENERGY SECTOR - GOVERNMENT'S ACHIEVEMENT

- The target of supplying petrol mixed with **10% ethanol (10% ethanol, 90% petrol)** was achieved in June 2022, ahead of the original schedule of November 2022.
- Encouraged by the success, the government advanced the target of making petrol with **20% ethanol** by **five years to 2025**.
- As of March **2021**, **2.82 crore households** have been electrified under **Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya Scheme).**
- By June 2022, over **36.86 crore LED bulbs**, **72.18 lakh LED tube lights** and **23.59 lakh energy-efficient fans** have been distributed across the country, saving around 48,411 million kWh per year and **Rs. 19,332 crores in cost savings**.
- **Solar tariffs** in India have **reduced** from **Rs. 7.36/kWh** in **FY15** to **Rs. 2.45/kWh** in **July 2021**.

WAY FORWARD

- **Unified Ministry of Energy:** Advocated by the Kelkar Committee and NITI Aayog's National Energy Policy, proposes a unified ministry to streamline energy governance.
- **Renewable Energy Potential:** High potential exists for renewable energy generation from sources like wind, solar, biomass, small hydro, and cogeneration bagasse.
- **Balanced Regulatory Interventions:** Regulators should understand sector challenges, crafting and enforcing policies to benefit all stakeholders.
- **Financial Constraints Resolution:** Establish a sustainable credit enhancement mechanism for energy sector funding, leveraging global agencies like The World Bank and ADB.
- **Smart Grid and Meter Network:** Interconnected electricity grid enhances reliability, flexibility, and economic competition, facilitating the One Nation, One Grid initiative.
- **Public-Private Partnership (PPP) Model:** Wider implementation of PPP models is necessary to strengthen energy infrastructure.
- **Uneven Renewable Energy Distribution:** NITI Aayog highlights the disparity in renewable energy uptake, especially in states with limited renewable resources.
- **AT&C Loss Reduction:** Innovative technologies like Big Data and AI can minimize Aggregate Technical & Commercial losses.

CONCLUSION:

The power sector is critical to the country's economic growth and development. The problems that this industry faces have a direct effect on other areas of the economy. As a result, the government needs to enhance the productivity of this sector by effective government initiatives.

DISCOMS: PRESENT STATUS AND STRATEGIES

- India has **one of the largest** and **most complex power sectors** in the world. Today, almost every citizen **has access to grid electricity, power deficiency has decreased** sharply, and the installed renewable energy capacity has reached approximately 40% of the total capacity.
- However, the sector still faces significant challenges. Most power **Distribution Companies (DISCOMs)** incur losses every year—the total loss is estimated to be **₹ 90,000 crore in FY 2021** according to the **Niti Ayog Report.**
  - **Due to these accumulated losses**, discoms are unable to pay for generators on time— as of **March 2021** an **amount of ₹ 67,917 crore** was overdue.
  - They are also **unable to make the investments necessary for ensuring continuous high-quality** power, or **build the infrastructure required** to facilitate the transition from fossil fuel to renewable (but intermittent) energy sources, such as solar or wind.

CHALLENGES FACED BY THE DISCOMS IN INDIA

- **A high degree of Aggregate Technical and Commercial (AT&C) losses:** lower rates of tariffs as compared to the cost of electricity delivery, and insufficient subsidy support from state governments are all contributing to DISCOMs' perilous financial status.
- **High subsidies**: Around **25% of energy sales** are too **subsidised**, and agricultural users are likewise subjected to inconsistent, low-quality supplies.
- **Higher Cost of Power Procurement:** It accounts for almost **80%** of the **expenditure of the discoms**.
- **Profitability:** The gap between discoms' costs (average cost of supply) and revenues (average revenue realised) stands at **Rs 0.49 per unit** due to lack of regular and commensurate tariff hikes

- **Poor Cash Flow:** Due to the **perennial cash collection shortfall**, often due to payment delays from consumers, DISCOMs are unable to make timely payments for their energy purchases from the generators.
- **Lack of Independence and Autonomy**: **The Electricity Amendment Act, 2003** has provided for **State Electricity Regulatory Commissions (SERCs)** to ensure independence and autonomy in fixing electricity tariffs.
- **Inability to boost rates due to a lack of political agreement at the state level**: Many states record losses because they were unable to close the gap between electricity expenses and income.

ROAD AHEAD FOR DISCOMS IN INDIA

- **Operational Reforms:** Improve AT&C losses by enhancing billing efficiency through smart metering.
- **Rationalisation of Subsidies:** Refrain from providing free electricity to ineligible beneficiaries.
- **Discom Restructuring:** Vertically unbundle the distribution sector to separate generation, transmission, and distribution functions, ensuring effective implementation.
- **Introducing Private Players and Governance:**
  - Promote clear separation between state-owned utilities and government.
  - Implement good corporate governance practices, including the appointment of independent directors.
  - Encourage higher private participation for increased efficiency, exemplified by successful franchisee models in Odisha and Maharashtra.
- **Regulatory Reforms:**
  - Empower State Electricity Regulatory Commissions (SERC) with autonomy, competence, and transparency.
  - Ensure regular tariff revisions reflecting actual costs.
  - Consider establishing regional electricity regulatory commissions to insulate regulatory functions from political influence.
- **Electricity Amendment Bill 2021:** Proposes delicensing power distribution to encourage private participation and competition, allowing consumers to choose from multiple service providers.
- **Direct Benefit Transfer (DBT):** Implement DBT for consumers receiving subsidised electricity to enhance efficiency and reduce leakages, as demonstrated in parts of Madhya Pradesh.
- **Renewable Energy Integration Reforms:** Enforce Renewable Purchase Obligations (RPOs) rigorously to ensure fair distribution of excess costs incurred in absorbing renewable energy.
- **One-time Financial Support:** Provide one-time financial assistance, as seen in the UDAY Scheme, to improve DISCOMs' financial positions, with states taking over a significant portion of their debts while DISCOMs work on reducing losses.

CONCLUSION

A combination of **low-cost renewable energy, use of technology in smart prepaid metres** with a **liberal dose of privatisation** can potentially break the high debt trap for discoms.

RENEWABLE ENERGY

- India has witnessed the fastest rate of growth in renewable energy capacity addition among all large economies, during the last 7.5 years with renewable **energy capacity growing by 2.9 times** and **solar energy expanding by over 18 times.**
- The Ministry of New and Renewable Energy is working towards achieving **500 GW of installed electricity capacity from non-fossil sources by 2030.**

GOVERNMENT INITIATIVES TO PROMOTE RENEWABLE ENERGY

- **FDI Policy:** Foreign Direct Investment (FDI) up to 100% is permitted in the renewable energy sector under the Automatic route, eliminating the need for prior Government approval.
- **National Solar Mission:** Part of the National Action Plan on Climate Change, it's designed to advance solar power adoption in India.
- **Production Linked Incentive (PLI) Scheme:** A scheme offering financial incentives to boost domestic manufacturing and attract significant investments in the electronics value chain.
- **Nation Green Corridor Programme:** A project aimed at synchronizing energy generated from renewable sources with conventional stations.

As of Feb 2023, **Renewable energy sources**, including large hydropower, have a combined installed capacity of **178.79 GW.**

The following is the installed capacity for Renewables:

- **Wind power:** 42.6 GW
- **Solar Power:** 66.7 GW
- **Biomass/Co-generation:** 10.2 GW
- **Small Hydro Power:** 4.94 GW
- **Waste To Energy:** 0.55 GW
- **Large Hydro:** 46.85 GW

Source: Invest India

- **Promotion of Solar Parks and Ultra Mega Solar Power Projects:** Objective is to establish at least 25 Solar Parks and Mega-Solar Power Projects to generate 20,000 MW of solar energy between 2014-15 and 2021-22.
- **National Clean Energy Fund:** Funded by carbon tax, it supports research and development of innovative eco-friendly technologies.
- **Sustainable Rooftop Implementation for Solar Transfiguration of India (SRISTI) scheme:** Provides financial assistance to individuals installing rooftop solar power plants.
- **PM-KUSUM (Pradhan Mantri-Kisan Urja Suraksha evam Utthaan Mahabhiyan):** Aims to ensure financial and water security for farmers by harnessing solar energy capacities of 25,750 MW by 2022.

BENEFITS OF RENEWABLE ENERGY

- **Opportunity for the private sector**: There is a possibility of around **$20 billion** per year business in the renewable energy sector.
    - A target of setting up 500 GW of renewable energy sources by 2030 means that we need to augment the renewable energy capacity by more than 30 GW per year.
- **Low maintenance cost**: As compared to the traditional sources of energy like coal-based or oil-based thermal power plants, solar energy has the advantage of almost **no requirement of procurement of fuel as well as lesser wear and tear** due to lack of movement of parts. Therefore, **return on investment is higher in the long run.**
- **Sustainability**: Renewable energy is a cleaner source of energy, thus, benefiting the environment in general and reducing pollution and the associated diseases in particular.
- **Atmanirbhar Bharat**: Investment by the private sector in renewable energy would also be helpful in fulfilling the **Government's objective of self-reliance**. It will also create employment opportunities in the country.
- **Emission commitments**: India committed to reduce the carbon emission by **33%-35% of 2005 levels by 2030** in the **COP-21 Paris Convention, 2015**

CHALLENGES FACED BY RENEWABLE ENERGY

- **Reliability:** Solar and wind energy, being variable, require supplementary energy sources to maintain base load, unlike thermal or nuclear energy, posing reliability challenges.
- **Creation of Storage Infrastructure:** To mitigate the variability of renewable sources, investment in large-capacity, affordable batteries is crucial, necessitating government commitment to instill confidence in the private sector.
- **Affordability:** Balancing the expansion of reliable energy access with affordability for consumers and financial stability for DISCOMs poses a significant challenge.
- **Funding:** Renewable energy projects require substantial initial investments, deterring project initiation without sufficient funding.
- **Building Manufacturing Capability:** Establishing manufacturing capacity in India is essential to reduce imports and promote self-reliance (Atmanirbhar Bharat), fostering investment and job creation.
- **Energy Trilemma:** India must navigate the energy trilemma by balancing affordability and access, energy security, and environmental sustainability to build a robust foundation for prosperity and competitiveness.
- **Economic Growth:** Achieving ambitious social and climate objectives, such as emission reduction, without compromising economic growth, presents a significant challenge.

SOLAR POWER AND INDIA

- India stands 4th globally in Renewable Energy Installed Capacity and 5th in Solar Power capacity (as per International Renewable Energy Agency - Renewable capacity statistics 2023).
- The installed solar energy capacity has **increased by 24.4 times in the last 9 years,** and stands at **66.7 GW as of May 2023.**
- By **2030**, the Indian government intends to increase the country's installed capacity for renewable energy **to 500 GW.**
- **57 Solar Parks** have been sanctioned with a cumulative capacity of 39.28 GW in 14 states.
- **Solar Rooftop** cumulative installed capacity is around **7.9 GW.**
- By **2030**, India has pledged to obtain **nearly half of its energy** from **non-fossil fuel** sources, and in the short term, **solar energy will account for at least 60% of that total.**

INDIA'S KEY FOCUS AREAS FOR COMING YEARS

- **Methanol and Biomass:**
    - Exploring alternatives like a methanol-based economy and biomass utilization for energy generation, which offers cleaner cities and reduces energy dependence. Biomass-derived fuels are cleaner and have a higher calorific value than traditional biomass.

- Government targets include bio-CNG vehicles with 20% petrol blending.
- **Twin Challenge:** India faces the dual task of providing more energy while ensuring it is cleaner.
- **Hydrogen-based FCV:** Adoption of hydrogen-based fuel cell vehicles is poised to transform the renewable energy landscape.
- **Grid Integration:** Focus on effective grid integration strategies to accommodate variable renewable energy sources.
- **Energy Transition:** Allocation of Rs 35,000 crore by the Ministry of Petroleum & Natural Gas for crucial capital projects aimed at energy transition, achieving net zero goals, and ensuring energy security.
- **Renewable Energy Evacuation:** Construction of an inter-state transmission system to evacuate and integrate 13 GW of renewable energy from Ladakh, requiring an investment of Rs 20,700 crore.
- **National Green Hydrogen Mission:** Launch of the National Green Hydrogen Mission with the objective of achieving energy independence for India by 2047.

ROADS

India has the **second-largest road network** in the world, spanning a **total of 5.89 million kilometres (kms).** This **road network transports 64.5%** of all goods in the country and **90%** of India's total passenger traffic uses the road network to commute.

KEY HIGHLIGHTS OF BUDGET 2024-25 AND ROAD SECTOR

- The interim budget for 2024-25 earmarked Rs 2,78,000 crore for road, transport, and highways, compared to Rs 2,70,434.71 crore in 2023-24. However, the revised allocation for 2023-24 stands at Rs 2,76,351.45 crore. Despite being a modest increase of 2.7%, the budgetary allocation for road transport and highways reflects a slight uptick, considering the already elevated base.

SIGNIFICANCE OF ROADS SECTOR IN INDIA

- **Socio-Economic Significance:**
  - Roads are vital for a nation's functioning, acting as economic lifelines.
  - **Facilitates Economic Growth:** Efficient road networks enable the smooth movement of goods and people, fostering economic development.
  - **Employment Opportunities:** Construction and subsequent utilization of roads contribute to job creation, stimulating economic growth.
- **Boost to Manufacturing and Exports:** Enhances Manufacturing Sector: Improved road infrastructure supports initiatives like "Make in India", boosting manufacturing and exports.
- **Rural Development:**
  - **Transporting Agricultural Goods:** Enables quick transportation of perishable agricultural products, fostering rural development.
  - **Access to Urban Amenities:** Better road connectivity allows rural areas to access essential urban services like healthcare and education.
- **Promotes National Integration:** Road connectivity strengthens national unity and facilitates troop movement, bolstering national security and defense.
- **Contribution to Sustainable Development Goals:**
  - **Urban Transport Improvement:** Developing urban public transport reduces pollution and supports sustainable development objectives.
  - Enhancing road infrastructure contributes to achieving targets related to road safety (Target 3.6); energy efficiency (Target 7.3), sustainable infrastructure (Target 9.1), urban access (Target 11.2), and fossil fuel subsidies (Target 12.c).

ISSUES AND CHALLENGES WITH ROADS SECTOR

- **Safety Related Concerns:** With almost **400 daily road-related deaths**, poor road quality, inadequate surveillance, and neglect of safety measures for two-wheeler riders and pedestrians. One of the reasons is **Skewed Road Traffic Engineering.**
- **Policy and Infrastructure Related Concerns:** Issues such as Legislative lacunae, Inadequate Capacity of existing highways, Delays in Land Acquisition, Lack of quality driving schools and Poor access to hinterlands.
- **Financial Concerns:** Lack of funds for **Road maintenance** and **high cost of escalation for roads** causes financial issues.

MEASURES TAKEN

- **National infrastructure Pipeline:** The government of India aimed to invest **Rs 111 Lakh crore** on the infrastructure sector during **2019-25**. Out of this **18% funds** shall be allocated for the **road sector**.
- **Bharat Mala Pariyojana:** Ministry of Road Transport and Highways introduced BharatMala Pariyojana as **an umbrella project for the highways sector.** The primary aim of the scheme is to improve the quality of roads and the construction of new roads. It focuses on developing **Economic Corridors**, **Feeder Routes**, **Port Connectivity** etc.
- **PM Gati Shakti Scheme:** Also called "**National Master Plan for multi-modal connectivity plan",** it is a platform to bring 16 ministries together for coordinated planning and execution of infrastructure projects in India to reduce logistics costs.
- **Special Accelerated Road Development Programme for North-East region (SARDP-NE):** Provides connectivity to remote areas.
- **Green Highways Policy:** Promotes greening of highway corridors.
- **Bhoomi Rashi - Land Acquisition Portal:** Digitizes land acquisition processes.
- **100% Foreign Direct Investment (FDI)** allowed in the road and highways sector under the automatic route.

WAY FORWARD

- Expansion of Road Connectivity
- **Improve Road Maintenance and Safety:** Maintain NH assets by adopting a Maintenance management system (MMS).
- **Streamline Land Acquisition:** Ensuring the proper functionality of MORTH's Bhoomi Rashi web portal.
- **Skill Development:** Introducing vocational training courses on road construction in Industrial Training Institutes.
- Increase Emphasis on Research and Development
- Increase the capacity and reach of public transport.
- Improve the Electronic Toll Collection (ETC) System.
- Use of recycled materials for construction to reduce emissions.
- Speedy resolution of disputes to unlock capital for highway construction.
- Implement tolls based on weight to curb overloading.
- Prevent wildlife and cattle on roads through enforcement and penalties.
- Collaborate to reduce environmental impact.
- Allocate budget for service roads alongside national highways.
- Ensure road safety through quality testing, rectification of black spots, and emergency response systems.

PM GATI SHAKTI PLAN

The PM Gati Shakti Initiative marked its two-year anniversary since its launch in October 2021.

- **About GATI Shakti Plan:**
  - PM Gati Shakti National Master Plan (PMGS-NMP) aims to provide multimodal connectivity infrastructure to various economic zones across India.
  - Economic zones encompass areas with manufacturing, value addition services, or other economic activities.
- **Objectives of the Plan:**
  - Incorporate economic zones like textile clusters, pharmaceutical clusters, and defense corridors into PMGS-NMP.
  - Establish a unified portal to coordinate 16 ministries, including Railways and Roadways.
- **Primary Focus:** Strategic planning, innovative financing methods, leveraging technology, and expediting implementation processes.
- **Scope:** Encompasses the seven engines of the National Infrastructure Pipeline (NIP), including Roads, Railways, Airports, Ports, Mass Transport, Waterways, and Logistics Infrastructure.

REGIONAL RAPID TRANSIT SYSTEM (RRTS)

Context

The First Regional Rapid Transit System (RRTS) in India was inaugurated, marked by the Namo Bharat RapidX train completing a 17-km stretch from Sahibabad to Duhai Depot in Uttar Pradesh.

- **About RRTS Project:**
  - It's a new, dedicated, high-speed, high-capacity commuter service connecting regional nodes in the National Capital Region (NCR).
  - Aims to enhance urban transportation amidst increasing population and urbanization challenges.
  - Operates at speeds of up to 160 km/hour, extendable to 180 km/hour.
- **Differentiation from Metro and Indian Railways:**
  - RRTS caters to longer-distance travelers with fewer stops and higher speeds compared to the metro.

- It provides reliable, high-frequency, point-to-point regional travel along a dedicated pathway, distinguishing it from conventional railways.
- Implementation is overseen by the National Capital Region Transport Corporation (NCRTC).

- **Significance:**
  - **Increased Economic Activity:** Shorter travel times enhance overall productivity in the region.
  - **Balanced Economic Development:** Improved connectivity fosters deeper economic integration and balanced development.
  - **Improved Access:** Faster commute grants access to more job opportunities, healthcare, and education facilities.
  - **Savings in Travel Cost and Time:** Affordable journeys lead to cost and time savings, enhancing quality of life.
  - **Lower Emissions:** Reduced carbon footprint and high passenger throughput contribute to pollution reduction.
  - **Easing of Road Congestion:** RRTS diverts traffic from roads to rail, alleviating congestion in the NCR.
- **Challenges in Implementation:**
  - **Financial Constraints:** Upfront investment for maintenance and operation strains public budgets.
  - **Environmental Concerns:** Construction activities pose air and noise pollution risks, along with engineering challenges.
- **Way Forward:**
  - Air-pollution control measures like water pumps and air monitoring devices to mitigate dust and pollution levels.
  - Design alignment with urban planning and environmental sustainability goals, integrating with existing transportation networks.
  - Integration of advanced technologies for optimized operations, including automatic train control systems and communication networks.

RAILWAYS

Being the **third largest network** in the world under single management and with over **68,102 routes (in kms)** Indian Railways strives to provide safe, efficient, competitive and world class transport systems.

Facts & Figures
• Railways' internal revenue for 2023-24 is estimated at Rs 2,65,000 crore, 9% higher than the revised estimates of 2022-23. • Traffic revenue is expected to comprise 99.8% of the total revenue. Furthermore, 68% of the traffic revenue comes from freight services. • The budget proposed a capital outlay of 2.40 lakh crore, which is the highest ever capital outlay.

ISSUES AND CHALLENGES AS PER THE NITI AAYOG'S INDIA@75 REPORT

- **Congested Networks:**
  - Infrastructure overutilization, with over 60% of routes exceeding 100% capacity.
  - **Result:** Decreased average speed for both passenger and freight trains.
- **Sub-optimal Internal Resource Generation:**
  - Minimal non-fare revenues and high freight tariffs.
  - **Consequence:** Subpar freight share; low passenger segment revenue due to static prices.
- **Poor Organizational Structure:**
  - Decision-making delays, lack of market orientation, lengthy project approval durations.
  - **Effect**: Slow turnover times, project implementation delays.
- **Safety and Service Quality:**
  - Recent accidents and safety concerns.
  - **Issues:** Train and station cleanliness, departure/arrival delays, food quality, ticket booking difficulties.
- **Inefficient Terminals:**
  - Majority of rail loads originate from terminals with inadequate facilities.
  - **Result:** Loading/unloading delays; terminal functionality enhancement required.
- **Lack of Economies of Scale:** Management quality and system accountability hindered by scale economy absence.
- **General Inefficiencies:** Indian Railways falls short on various parameters, missing electrification, track renewals, bridge works, and track doubling targets.
- **Environmental Concerns:** Fourth largest railway system globally, causing significant water and noise pollution, and inadequate waste management.

STEPS TAKEN

- **For safety: The Kavach system was announced in the 2022 Union Budget** as a part of the **Atma Nirbhar Bharat** initiative.
- **To address environmental concerns:** In January 2020, it was announced that the entire network of the Indian Railways will run on electricity by 2024 and become a **net-zero emission network by 2030.**
- **For Agriculture: Kisan Rails** are introduced to provide freight service to agricultural commodities. Under this initiative, 157 trains have been introduced on eight routes for transporting more than 49,000 tonnes of commodities.
- **Station Infrastructure Redevelopment Programme:** The purpose of this programme is to redevelop **400 railway stations** throughout the country under a **public-private partnership (PPP) model.**
- **For Improving Efficiency:**
  - **Mission Hungry for Cargo:** It was introduced with the aim of increasing the share of railways in goods transportation. The railways aspire to raise their share in freight transportation from 27% to 45%.
  - **Mission Raftaar:** It aims to double the average speed of the freight trains. It also aspires to increase the speed of express trains by **25 KMPH.**

WAY FORWARD

- **Implement Safety Review Committee's Recommendations (chaired by Dr. Kakodkar):**
  - Advance signaling system implementation.
  - Eliminate all level crossings.
  - Transition to safer LHB design for new coaches.
- Corporatize Indian Railways.
- **Bibek Debroy Committee Recommendations:**
  - Transition to commercial accounting.
  - Streamline recruitment and HR processes.
  - Establish Independent Regulator RRAI.
  - Encourage private entry in freight and passenger train operations.
  - Establish Indian Railway Manufacturing Company for production units.
  - Set up Investment Advisory Committee for resource raising.
  - Implement decentralization at lower operational levels

DEDICATED FREIGHT CORRIDORS

A successful trial run of goods trains consisting of 53 wagons loaded with coal was conducted between New Karchana and New Sujatpur stations of Eastern Dedicated Freight Corridor (EDFC).

ABOUT DEDICATED FREIGHT CORRIDOR

- **DFC is a high-speed and high-capacity railway corridor dedicated exclusively for freight** (goods and commodity) movement.
- In 2006, the Government of India established a dedicated body, the **Dedicated Freight Corridor Corporation of India** (DFCCIL), to develop two corridors - Western Dedicated Freight Corridor (WDFC) and Eastern Dedicated Freight Corridor (EDFC).
- **Four more Freight Corridors were also announced in 2010:**
  - East-West Corridor (Kolkata-Mumbai)
  - North-South Corridor (Delhi-Chennai)
  - East Coast Corridor (Kharagpur-Vijayawada)
  - Southern Corridor (Chennai-Goa)

SIGNIFICANCE OF DFCS:

- **Increased Capacity**: The DFC shall reform the transportation sector and will create more capacity on trunk routes of Indian Railways as goods trains shall be able to run freely on DFC without any restrictions imposed by movement of passenger trains.
- **Decongestion**: Around **70% of the freight trains** currently running on the Indian Railway network are slated to shift to the freight corridors, leaving the paths open for more passenger trains.
- **Business Generation**: Tracks on DFC are designed to carry heavier loads than most of Indian Railways. DFC will get track access charges from the parent Indian Railways, and also generate its own freight business.
- **Punctuality**: The new section means on the Indian Railway main line, more passenger trains can be pumped in and those trains can, in turn, achieve better punctuality.
- **Reduce unit cost of transportation** by speeding up freight train operations & higher productivity.

- **Reduction in Pollution**: As per a **30 year Greenhouse Gas (GHS) emission** forecast, if there were no dedicated freight corridors, the GHG emissions would be 582 million ton CO_2, while the emissions with the two DFCs in service would be less than one-fourth at 124.5 million ton CO_2.
- **Cost Reduction:** Quicker transit times, reduced fuel consumption, and increased carrying capacity per train lead to lower transportation costs for businesses.
- **Infrastructure Upgradation:** Modern signaling systems, electrification, and new rail lines improve overall railway infrastructure.
- **Equitable Regional Development:** Integrates less developed regions with developed ones, facilitating economic integration and resource distribution.
- **Other Benefits:** Employment Generation, Eco-friendly, Ease of Doing Business etc.

ISSUES AND CHALLENGES

- **Issue of Land Acquisition**: Due to route alignment, the railways have to acquire large swathes of private land that are already developed, making the construction of the corridor difficult.
- **Double stack vs single stack**: The project has adopted different technical standards for WDFC and EDFC. WDFC would have moving dimensions made for double stacked containers and moving dimensions for EDFC are being made for single stack container operations.
- **Slow progress**: The progress for both Logistics Parks and Delhi Mumbai Industrial Corridor has been very slow which will have an impact on the overall objective of the project.
- **Funding and Financing:** Delays in funding can impact project timelines and increase costs.
- **Technical Challenges:** Diverse terrains, bridge and tunnel construction, and alignment safety standards.
- **Integration with Existing Network:** Ensuring smooth connectivity and interoperability with existing infrastructure.
- **Market Demand and Utilization:** Changes in market dynamics and freight demand fluctuations affect corridor utilization.

WAY FORWARD

- **Efficient Integration with Existing Network:** Improve interchange-connecting points between Indian Railways' network and DFCs.
- **Accelerated Land Acquisition:** Expedite land acquisition with fair compensation and utilize technology for surveys.
- **Market Analysis and Demand Forecasting:** Conduct thorough analysis to align DFC capacity with freight demand projections.

CONCLUSION

The DFCs project is the biggest leap for Indian Railways, not just because of its route length, but also because of the technology it ushers, the rail infrastructure it will enable, and the **socio-economic transformation** it shall result in.

Data and Facts

- Number of train accidents fell down from 104 “consequential train accidents” in 2016-17, to 35 in 2021-22.
- No loss of life was reported for two years from 2019-20 to 2020-21.
- Damage to the railways’ property from accidents came down from Rs 61 crore in 2016-17 to Rs 28 crore in 2020-21.

PORTS & WATERWAYS

INTRODUCTION

- **Port** performance in an economy is crucial for trade competitiveness of that economy. Expansion of port capacity has been accorded the highest priority by the Government through implementation of well-conceived infrastructure development projects.
- **Inland Waterways:** Inland waterway is a network of rivers, canals, backwaters, and creeks that can be utilized for transportation instead of or in addition to roads and rails. It is the **cheapest mode of transport.**

SIGNIFICANCE

- Eco Friendly mode of Transport
- Cheaper means of Transport
- Low maintenance and operations cost

- Least consumption of energy is required.
- Suitable for heavy and bulky goods
- Less or no frictional force as compared to roads and railways.

ISSUES/CHALLENGES

- **Challenges of Cost Estimation:**
  - Comparison of operating costs per ton-km between Inland Water Transport (IWT) and rail/road transport is debatable.
  - Freight costs on roads or railways may not differ significantly from IWT due to straight road routes versus winding river routes.
  - Loading and unloading costs increase due to mode change for last-mile delivery.
- **Issues Pertaining to Waterways:**
  - **Inadequate Draught Levels:** Many Indian rivers lack sufficient water levels, requiring extensive dredging for navigation.
  - **Problem of Siltation:** Siltation reduces river depth and water availability, complicating navigation.
  - **Transhipment Port:** Absence of transhipment ports in India leads to additional costs and delays, forcing container transshipment through ports like Colombo, Singapore, Dubai, and Salalah.
  - **Regulatory Issues for Inland Waterways:** Governance by various **States' Ferries Acts** till 2021 creates barriers in inland navigation.
  - **Environmental Concerns:** Environmental degradation results in extreme climates like super cyclones, leading to tree uprooting, erosion, river pollution, and increased siltation, hampering navigation.

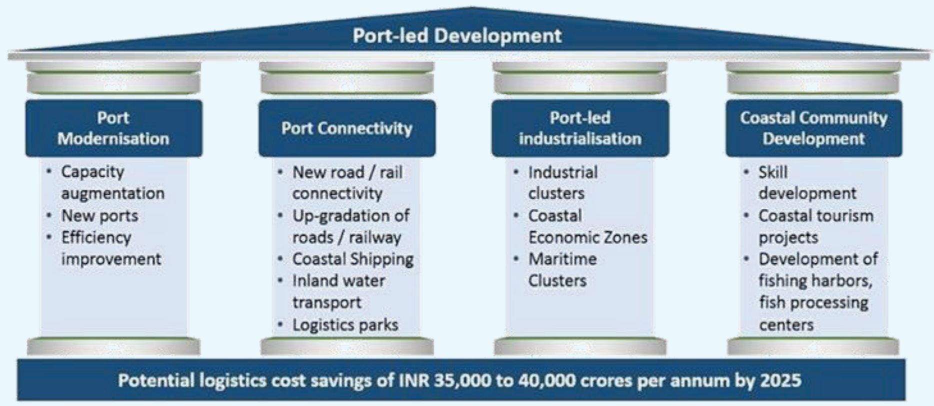
STEPS TAKEN

Issues	Steps Taken
Regulatory Hurdles	**Inland Vessels Act, 2021:** This is a unified regulatory framework for inland vessel navigation which will replace the various rules put forth by the various states. It stipulates the maintenance of a centralised database of information on inland vessels, which will contain all details regarding vessel registration, vessel crew, and issued certificates.
Hinterland Connectivity	**Jal Marg Vikas Project:** It was put into place with the assistance of the World Bank as a step towards national integration with the goal of reducing traffic on the roads and trains, carbon emissions, and minimal resource depletion.
Operational Issues	The Government of India has launched **Project UNNATI** to find areas where operations can be improved.
Renewable of captive Ports Business	To address the problems of renewing the concession period, the scope of expansion, and the dynamic business environment, a new captive policy for port-dependent industries has been prepared.
Tariff regulation	The government has permitted the private ports to set their own tariffs after consulting with the State Maritime Boards. The Tariff Authority for Major Ports (TAMP) overseas tariffs at major ports.
Transparency	Model Concession Agreement (MCA) has been formulated to bring transparency and uniformity to contractual agreements that major ports would enter with chosen bidders for projects under the build, operate and transfer (BOT) framework.
Lack of World standards Ports	To develop global standard ports in India, Maritime India Vision (MIV) 2030 has identified initiatives such as developing world-class Mega Ports, transhipment hubs and infrastructure modernization of ports.

Impact on Ecology	The government established the first National Centre of Excellence in Green Port and Shipping in the nation to create a legal framework and a road map for adopting alternative technologies for Green Shipping to promote carbon neutrality and circular economy (CE) in the shipping sector.

Sagarmala Project

- The Sagarmala programme is the Ministry of Shipping's flagship initiative intended to promote port-led development in the nation by utilising its 14,500 km of potentially navigable waterways, 7,500 km of coastline, and advantageous location on major international maritime trade routes.
- It was approved by the Union Cabinet in March 2015.



Achievement:

- **Development New Ports area:** 29 projects have been successfully implemented using the PPP model, lowering the cost to the exchequer in the process.
- **Investment for capacity building:**
- As of now, more than 500 projects have been identified at an estimated infrastructure investment of more than Rs. 3.50 Lakh Crore across all the pillars.
- There has been an increase of more than 80 million metric tonnes per annum capacity in cargo handling in addition to greater connectivity between ports.
- **Improvement in operational efficiency:** The Turnaround Time (containers) at Ports has decreased from 44.70 hours in 2013–14 to 26.58 hours in 2021-22 as a result of the quality service delivery.
- **Navigation through River:** For the first time, a cargo ship travelled 2,350 km from Patna to Pandu via Bangladesh. Farmers and business people in North-East India now have more opportunities to trade with the rest of India and the rest of the world.

WAY FORWARD

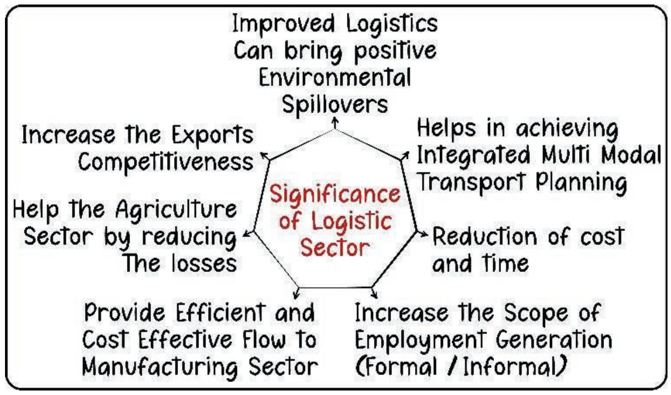
- **Public-Private Partnership:**
  - Strengthening collaboration between public and private sectors is vital for inland waterways development.
  - Private entities can engage in terminal development, cargo and passenger handling, and constructing low-draft vessels and repair facilities.
- **Development of Basic Infrastructure:** Focus on building essential infrastructure, resolving technological hurdles, and maintaining rivers for year-round navigability.
- **Ensuring Last Mile Connectivity:** Ensure seamless multimodal last-mile connectivity to and from hinterlands to reduce transshipment costs and enhance inland water transport viability.
- **Incentivizing Cargo Transport:** Provide incentives to encourage cargo transport via inland waterways.
- **Higher Road Taxes for Inflammable Goods:** Impose higher road taxes on transportation of coal and inflammable materials over longer distances.
- **Development of Passenger Terminals:** Government initiatives to develop passenger terminals, support ferry operators for safety enhancement, and facilitate insurance coverage to promote passenger transport.
- **Promoting River Tourism:** Promote river tourism in states like Assam and Kerala, exemplified by initiatives such as the Ganga Vilas, the world's longest river cruise, to boost waterway tourism.

CONCLUSION

National **waterways provide a cost-effective, logistically efficient and environment friendly mode of transport,** whose development as a **supplementary mode** would enable diversion of traffic from over-congested roads and railways. Hence, the waterways project deserves better regulation and development across the country.

LOGISTIC SECTOR

- An efficient, competitive and resilient logistics ecosystem is pivotal to boost exports. Despite multiple challenges, India has made substantial progress in trade-related logistics, reflected in leading global indices.
- The Indian logistics sector is a **sunshine industry** and is going through a phase of transformation on account of various reform initiatives and policy changes.
- The major reforms include the **GST, roll out of E-Way bill and the sector being granted infrastructure status.**



SIGNIFICANCE

Five significant points of the logistics sector:

- **Efficiency Boost:** Logistics ensures streamlined supply chains, leading to increased operational efficiency and reduced costs.
- **Global Trade Facilitation:** Efficient logistics supports international trade by connecting producers, suppliers, and consumers across borders.
- **Job Creation:** The logistics sector provides employment opportunities and contributes to economic growth.
- **Infrastructure Development:** Investments in logistics infrastructure (ports, roads, warehouses) enhance overall connectivity.
- **Customer Satisfaction:** Well-managed logistics ensures timely delivery, improving customer satisfaction.

ISSUES/CHALLENGES

- **High Cost of Logistics:** Challenges in accessing finance, underdeveloped infrastructure, poor connectivity, and unfavorable modal mix contribute to high logistics costs.
- **Coordination Due to Multiple Stakeholders' Involvement:** Logistics involves various components under different regulatory oversight, leading to complexity and duplicate processes due to multiple agencies.
- **Lack of Interoperable Technology:** Absence of last-mile connectivity and infrastructure hinders seamless movement of goods across modes.
- **Competition and Underutilized Capacity:** Public sector benefits create an uneven playing field, limiting competition, underutilizing capacity, and causing inefficiencies.
- **Warehousing Capacity and Fragmented Structure:** Warehouse sector lacks value addition, with manual handling and unmechanized facilities for many commodities.
- **Lack of Seamless Goods Movement Across Modes and High Dwell Time:** Absence of interoperable technology and last-mile connectivity hampers goods movement efficiency.
- **Inadequate Funding:** Severe fund crunch in logistics sector impacts infrastructure development and operational capabilities.
- **Lack of Multi-Modal Capabilities:** Disparity in India's multi-modal infrastructure usage compared to global standards, with road transport dominating logistics movement.

National Logistics Policy (NLP), 2022

National Logistics Policy (NLP) was launched on 17th September 2022 to boost the ease of doing business and enhance the liveability quotient.

Objective

- To ensure seamless transportation of goods and services throughout the nation, reduce the logistics cost from 14% of GDP to a global average of 8 per cent by 2030.
- This will improve the ability of Indian goods to compete in both the domestic and global markets.
- Additionally, the lower cost will boost efficiency efforts that span all economic sectors, which promotes value addition and entrepreneurship.

Vision

- To develop a technologically enabled, cost-efficient, sustainable, and trusted logistics ecosystem for accelerated growth.
- **NLP is based on four pillars**
  - **Integration of Digital System (IDS):** Different systems from seven different departments (such as road transport, railroads, aviation, commerce ministries, and foreign trade) will be digitally integrated.

- Unified Logistics Interface Platform (ULIP): This enables confidential real-time information exchange while ensuring faster and more seamless cargo movement.
- **Ease of Logistics (ELOG):** It will enable and ensure the ease of logistics business through transparency and accessibility.
- **System Improvement Group:** It will routinely keep track of all logistics-related projects.

Challenges for NLP – 2022

- **Challenges to create a Roadmap to reduce cost:** At present, logistics costs the economy 14 percent of GDP, compared to the global average of about 8 per cent. However, an effective roadmap and strategy have not been chalked out to reduce transportation costs, like an increase in fuel cost, compliance issues (BS – VI, Government taxes) etc have further increased the cost of logistics.
- **Failed to provide a way forward for crude oil:** Crude oil consists of a major cost of transportation but the policy failed to provide a way out to control fuel costs.
- **Budget allocation for Railways structural changes:** To gap the Structural deficiencies such as being over-dependent on Roads (60% of cargo movement) and to address speed, wagon availability etc.
- **Less focus on Technology and skill:** There is an urgent need to automate logistics processes such as the use of RFID, GPS warehouse management systems etc. There is also a requirement for the skillset of the workforce and accessibility to new-age technological solutions.

WAY FORWARD

- **Technological Intervention:**
  - Emphasize adoption of new technologies like automation, digitization, and skill development to enhance logistics efficiency.
  - Address technology-related bottlenecks and upgrade intermodal transportation.
  - **Example:** Ministry of Commerce and Industry developing an integrated logistics portal for efficient transactions among buyers, logistics providers, and government agencies.
- **Competitive Ranking Among States:** Launch of Logistics Ease Across Different States (LEADS) Index by Ministry of Commerce and Industry to assess and rank states based on their support for improving logistics infrastructure.
- **Setting Up Smart Warehousing:**
  - Urgent investment needed in digitization and automation for smart warehousing.
  - Despite provisions in the 2023 budget, implementation should be expedited.
- **Dedicated Investment Portal:**
  - Enhanced investment focus in logistics sector to address bottlenecks like skill development and intermodal transportation.
  - Implementation of a single window system for clearances and simplified processes through improved investment facilitation.
- **Improve Regulatory Regime:** Proposed National Logistics Law aims to establish an agile regulatory environment with a unified legal framework for streamlined contracts.
- **Rationalization in Tax Rates:** Taxation reforms such as GST and establishment of a Logistics Division in the Department of Commerce to enhance regulatory efficiency.

CONCLUSION

Logistics being at the heart of economic growth, needs special attention. As we enter Amrit Kaal it is important to address issues and challenges pertaining to the logistics sector, as to propel India to a higher growth trajectory.

AVIATION

INTRODUCTION

- Airways play a **vital role as modern means of transportation**. It is very important for the growth of trade and commerce.
- India is presently **among the top 10 civil aviation markets in the world.**
- India's passenger traffic stood at **327.28 million in FY23**. It grew at a compound annual growth rate (CAGR) of **11.13% during FY16-FY20.**

ISSUES/CHALLENGES

- **Regulatory Complexes**: The **complex regulatory framework** in India's aviation industry, involving agencies like the **Ministry of Civil Aviation, DGCA, AAI,** etc. leads to challenges such as **unclear policies and delays** in obtaining permits.

- **Skilled Workforce Shortage**: The aviation sector faces challenges due to a **shortage of skilled professionals**, impacting safety and causing delays. **High training costs and outdated training facilities** in India contribute to a skills mismatch.
- **Dollar Dependency Impact**: Fluctuations in the dollar rate against the Indian Rupee can severely impact profits since major expenditures like **aircraft acquisition, maintenance, and lease cost**s are dollar-denominated.
- **Cutthroat Pricing**: To attract passengers, airlines in India often resort to **drastically reducing ticket prices,** making it challenging to balance the cost, especially when operational costs remain high.
    - **For instance, Go First** (also known as Go Air) has recently been grounded citing the **shortage of funds** and **lack of supply of parts**, similar to Jet Airways, Kingfisher, and many other airlines that once operated in India and are now defunct.

- **Supply Chain Issues:** According to Centre for Aviation (CAPA) India, more than 100 planes of various Indian carriers are on the ground due to supply chain and non-supply chain issues.
- **Comparatively Low Penetration:** Despite the rapid growth witnessed in the passenger traffic, its per capita penetration is still significantly low versus global average. As per data compiled by the World Bank and Jeffries, India is at 0.13 seats deployed per capita (domestic air travel penetration) against 0.49 for China and 0.57 for Brazil.
- **High Fuel Costs:** In India, the cost of Aircraft Turbine Fuel (ATF) can account for 50-70 percent of an airline's operational expenses.

GOVERNMENT INITIATIVES

Government Initiatives	
Digi Yatra Platform	• It is a biometric-based digital processing system that avoids multiple checks of passengers at the airport by issuing a unique Digi Yatra ID through which a passenger can enter and fulfil other checking requirements at the airport.
UDAN Scheme (Ude Desh Ka Aam Naagrik)	• Regional Connectivity Scheme (RCS) • The 10-year scheme will promote balanced regional growth and make flying affordable for the population. In addition to the 140 new RCS routes awarded under UDAN 4.2 and 4.3, 50 new RCS (Regional Connectivity Scheme) routes began in 2022.
GAGAN	• GPS-Aided Geo Augmented Navigation (GAGAN) • It is India's first Satellite-based Augmentation System. It provides additional accuracy for safety in civil aviation and has expansion capability for seamless navigation services across geographies. In April 2023 Indigo made its first landing using GAGAN.
Operational efficiency	• The government is chalking policy to improve operational efficiency such as the availability and utility of aeroplanes effectively. Eighteen entities have registered for 'Framework for Aircraft Leases' issued by the International Financial Services Centres Authority (IFSCA), to enable aircraft leasing.
Krishi Udan	• Under this scheme, the facility has been extended for Seamless cost-effective time-bound air transportation for the farmers.
National Civil Aviation Policy (NCAP), 2016	• Promoting 'Make in India' in the Civil Aviation Sector. • Ensuring availability of quality certified 3.3 lakh skilled personnel by 2025. • Restoration of air strips at a maximum cost of Rs. 50 crore through Airports Authority of India (AAI).

	• Enhancing ease of doing business through deregulation, simplified procedures, and e-governance. • Future tariffs at all airports will be calculated on a 'hybrid till' basis. Under 'hybrid till', only up to 30 per cent of the non-aeronautical revenues.
Vision 2040 document	• The Ministry of Civil Aviation (MoCA) on January 15, 2019, unveiled the Vision 2040 document, which highlights the growth potential in different sub-sectors of Indian aviation and the key action steps are required to be taken to achieve the desired objective. • As per the document the total passenger traffic (to, from and within India) in India is expected to rise nearly six-fold from 187 million in FY 2018 to around 1124 million in FY 2040. This includes around 821 million domestic passengers and around 303 million international passengers (to and from India).

WAY FORWARD

- **Development of MRO Industry:** Leverage India's comparative advantages to become a leading MRO centre.
- **Promote Air-Cargo Growth:**
  - Establish integrated digital supply chain or e-cargo gateway.
  - Encourage "Fly-from-India" concept with transhipment hubs.
- **Active Role of State Governments:** Engage in airport sector to drive local economic development.
- **Increase Sector Investment:**
  - Provide financial and infrastructure support.
  - Create additional parking hubs accessible through short-haul flights.
- **Privatization in Aviation Sector:**
  - Air India disinvestment process initiated in June 2017.
  - Air India privatized to Tata Sons in January 2022.
- **Transform India into Transhipment Hub:** Boost trading capacity, foreign exchange earnings, and regional connectivity.
- **Ensuring Crew and Passenger Safety:**
  - **Crew training:** Ensuring the crew i**s well trained** and holding **regular drills** to ensure safety of passenger and crew aboard the plane. As per the **US Federal Aviation Administration (FAA)** regulations, aircraft manufacturers are required to demonstrate that all passengers and crew members can **evacuate a plane within 90 seconds**.
  - **Education**: While Indian airlines do make the **mandatory safety announcements,** the whole process **should be simplified**, and the message needs to be conveyed in a more **visual manner.**
- **Efficient Regulatory System:** There's a need for a more clear, consistent, and efficient regulatory system. Achieving enhanced transparency, accountability, faster reform, and increased engagement with industry stakeholders is crucial for the industry's growth and development.
- **Upskilling Workforce:** Coordination between the industry and educational institutions is crucial to align training programs with industry requirements.

CONCLUSION

With the right policies and relentless focus on quality, cost and passenger interest, India would be well placed to achieve its vision of becoming the third-largest aviation market by 2024 and the 17 SDGs and 169 targets by 2030. However, the real achievement will be witnessed only when every district in the country would be connected to the air grid and the common man would be able to access and afford the same.

Key Terms: Policy Paralysis, Ageing Power Plants, Interstate Disputes, Balanced Regulatory Interventions, Smart Electricity Grid, Smart Meter Network, Renewable Purchase Obligations, DISCOMs Restructuring, Rationalisation of Subsidies, Electric Mobility, Energy Trilemma (Affordability and access, energy security, and environmental sustainability).
National Highways Authority of India, Infrastructure Finance Secretariat, Pradhan Mantri PVTG Development Mission, PM Gati Shakti programme, Transit Oriented Development, Green National Highways Corridor Project, Agenda for Sustainable Development, Electronic Toll Collection , iRAD system. Inland Waterways, Coastal Community Development, Transhipment port, Extensive dredging, Mode of transport for last-mile delivery, Inland

Vessels Act, Captive Ports Business, Tariff regulation, Model Concession Agreement (MCA), Maritime India Vision (MIV) 2030, Circular economy, Lighthouse Tourism, Multimodal terminals, Coastal Tourism, Interoperable technology, Industry fragmentation, Dedicated Freight Corridor, Freight Smart Cities initiative, Multi modal logistics park (MMLP), National Logistics Policy, Unified Logistics Interface Platform (ULIP), Logistics Performance Index, Greenfield Airports, Drone Policy, Regional Connectivity Scheme (RCS), Infrastructure Deficit, Aviation Turbine Fuel (ATF), Predatory Pricing, Aviation safety, Directorate General of Civil Aviation (DGCA), Digi Yatra Platform, UDAN Scheme (Ude Desh Ka Aam Naagrik), GAGAN, GPS-Aided Geo Augmented Navigation, Strategic disinvestment, Operational efficiency, International Financial Services Centres Authority (IFSCA), Krishi Udan, National Civil Aviation Policy (NCAP), Vision 2040 document, MRO (Maintenance Repairs and Overhaul/Operations), National Air Cargo Community System (NACCS), Transhipment Hub.

Previous Year Questions		
1.	Do you think India will meet 50 percent of its energy needs from renewable energy by 2030? Justify your answer. How will the shift of subsidies from fossil fuels to renewables help achieve the above objective? Explain.	2022
2.	Describe the benefits of deriving electric energy from sunlight in contrast to conventional energy generation. What are the initiatives offered by our government for this purpose?	2020
3.	"Access to affordable, reliable, sustainable and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs)." Comment on the progress made in India in this regard.	2018
4.	One of the intended objectives of Union-Budget 2017-18 is to 'transform, energise and clean India'. Analyse the measures proposed in the Budget 2017-18 to achieve the objective.	2017
5.	Give an account of the current status and the targets to be achieved pertaining to renewable energy sources in the country. Discuss in brief the importance of the National Programme on Light Emitting Diodes (LEDs).	2016
6.	To what factors can the recent dramatic fall in equipment costs and tariff of solar energy be attributed? What implications does the trend have for the thermal power producers and the related industry?	2015
7.	Should the pursuit of carbon credits and clean development mechanisms set up under UNFCCC-be maintained even though there has been a massive slide in the value of a carbon credit? Discuss with respect to India's energy needs for economic growth.	2014
8.	The Gati-Shakti Yojana needs meticulous coordination between the government and the private sector to achieve the goal of connectivity. Discuss.	2022
9.	Investment in infrastructure is essential for more rapid and inclusive economic growth". Discuss in the light of India's experience.	2021
10	Not many years ago, river linking was a concept but it is becoming a reality in the country. Discuss the advantage of river linking and its possible impact on the environment.	2017
11.	Discuss the Namami Gange and National Mission for Clean Ganga (NMCG) programmes and causes of mixed results from the previous schemes. What quantum leaps can help preserve the river Ganga better than incremental inputs?	2015
12.	Enumerate the National water policy of India. Taking river Ganges as an example, discuss the strategies which may be adopted for river water pollution control and management. What are the legal provisions of management and handling of hazardous wastes in India.	2013

13.	Examine the development of Airports in India through joint ventures under Public-Private-Partnership (PPP) model. What are the challenges faced by the authorities in this regard?	2017
14.	International Civil Aviation laws provide all countries complete and exclusive sovereignty over the airspace above their territory. What do you understand about 'airspace'? What are the implications of these laws on the space above this airspace? Discuss the challenges which this poses and suggest ways to contain the threat.	2014

15 INVESTMENT

- Investment is an asset acquired or money committed with a purpose to earn income in future.
- A large amount of investment is required for an economy to progress and develop. The Government alone can't finance it due to fiscal deficit targets. The developmental projects also require the level of **technical expertise, management skills** and **professionalism** that may not be available in the traditional bureaucratic apparatus. Thus, investment is one of the essentials for any economy.

IMPORTANCE OF INVESTMENTS FOR ECONOMY

- **More Opportunities**: It opens up the possibilities of large-scale production.
- **Technology**: Modern techniques and scientific inventions are utilized.
- **Urbanization**: It also leads to industrialization and urbanization.
- **Tools and Equipment**: It provides the necessary tools and equipment for production.
- **Employment**: New job opportunities are created in factories, projects, and construction work.

PUBLIC INVESTMENT MODEL

It refers to an investment model in which investment in specific goods and services is made by the government or with the help of the public sector by using the revenue earned through taxation.

ROLE OF PUBLIC INVESTMENT IN THE ECONOMY

- **Increased Productivity:** Channels savings into productivity-enhancing projects.
- **Positive Economic Impact:** IMF notes that a 1% increase in public investment can boost GDP by 2.7%, private investment by 10%, and employment by 1.2%.
- **Infrastructure Development:** Creates physical infrastructure such as roads, railways, and airports, especially in underdeveloped areas, and encourages private sector participation.
- **Human Capital Development:** Targeted investment improves human capital, fosters technological innovation, and enhances productivity.
- **Sustainable Growth:** Accelerates economic recovery and establishes sustainable growth patterns.
- **Regional Growth Promotion:** Prioritizes balanced regional economic growth, reducing regional inequalities.

SHORTCOMINGS WITH PUBLIC INVESTMENT

- **Lower Tax Base:** Government faces funding challenges due to lower tax base, parallel economy, and tax evasion.
- **Long-term Nature:** Infrastructure investment, being long-term, may be undervalued compared to short-term electoral benefits.
- **Inefficiencies:** Public investment model may suffer from red tape and bureaucratic inefficiencies.
- **Large Fiscal Deficit:** Increased government borrowing for public investment raises fiscal deficit and may crowd out private investment.

PRIVATE INVESTMENT MODEL

It refers to the investment model in which the private sector makes investment in some of the ventures. This investment can be from domestic or international markets in the form of FPI or FDI.

ROLE OF PRIVATE INVESTMENT IN ECONOMY

- **Supplements Government Resources:** Private investment complements government resources in creating value, especially when tax revenue falls short of meeting economic demands.
- **Improves Efficiency:** Enhances efficiency through increased competition, economies of scale, and greater flexibility.
- **Fosters Innovation:** Emphasizes research and development, consumer behavior mapping, and fosters greater innovation.
- **Access Foreign Technology:** Foreign Direct Investments (FDIs) introduce foreign technology, enhancing competitiveness.
- **Change Global Perception:** Increased private investment signals economic progress, altering global perception, as seen with investments from companies like Apple in India.
- **Encourages Entrepreneurial Risks:** Embraces entrepreneurial risk-taking, promoting job creation, wealth generation, and income growth.

SHORTCOMINGS WITH PRIVATE INVESTMENT

- **Favour Advanced States:** Private sector investment tends to favor regions with existing infrastructure, disadvantaging poorer states like Bihar and Jharkhand.
- **Global Fluctuations:** Private investment, particularly through Foreign Portfolio Investments (FPIs), is susceptible to global economic fluctuations.
- **Poor Perception:** Driven by profit motive, private investment faces allegations of crony capitalism and has a poor public perception.
- **Low Investment during Recession:** Private investment tends to decrease during economic downturns, despite being crucial during such times.
- **Inequality:** Profits from private sectors often concentrate in the hands of private players, leading to increased inequality among different sections of society, as observed in India post-1991 reforms.

PUBLIC-PRIVATE-PARTNERSHIP (PPP) MODEL

PPP is a long-term contractual arrangement between the public and private sectors to provide public assets and services. It leverages private sector expertise and incentives to ensure efficient and timely completion of projects, without privatizing the services.

Advantages of PPP

- PPP ensures the **long-term partnership** to deliver assets and services to the public at a concessional rate.
- **Increases efficiency** by means of long-term collaborations between private and public sectors.
- **Increases cooperation** between public authorities and the world of business, ensuring funding, management and maintenance of infrastructure built.
- **Delivery quality services** that provide whole life costing.
- **Transferring risk** increases competition and maintains the value of public assets.

TYPES OF PUBLIC PRIVATE PARTNERSHIP (PPP)

Build-Operate-Transfer (BOT)

In this approach, the **government gives a concession to a private entity to build a facility** (and possibly design it as well), **own the facility, lease the facility to the public sector** and then at the end of the lease period **transfers the ownership** of the facility to the government.

- **Owner**: Private player but after time limit is over/ private player's investment is recovered, the ownership is transferred to Government.
- **Financer**: Government
- **Operation and Maintenance:** Private player takes care of operation and maintenance during contract period, then government itself starts operating it (or outsource).

DESIGN-BUILD-OPERATE-TRANSFER (DBOT)

In this model, the entire responsibility for the design, construction, finance, and operation of the project for the period of concession lies with the private party.

- **Owner**: Private player but after time limit is over/private player's investment is recovered, the ownership transferred to Govt.
- **Financer**: Private player is responsible to arrange from its pocket /market.
- **Operation and maintenance:** Private player takes care of operation and maintenance during the contact period, then government itself may start operating it (or outsource it).
- **Toll Collection**: It could be toll or annuity depending on the project. E.g., Delhi-Mumbai highway - private players would love to have a Toll model, whereas in Nagaland Manipur highway they'd prefer annuity model due to less growth projection in traffic.

CLUSTER BASED INVESTMENT MODELS

Hybrid Annuity Model (HAM)	• It is a mixture of BOT Annuity and EPC Models in India. • The first 40% of the project cost is paid as a fixed amount. This fixed payment is further divided into five equal instalments. • The remaining 60% of the project cost is paid as a variable annuity amount after the completion of the project. • The variable annuity payment is determined based on the value of assets created by the project. The higher the value of the assets, the higher the variable annuity payment

BOT Annuity Model	• Under BOT annuity, a developer builds the highway, operates it for a specified duration and transfers it back to the government. • The governments start payment to the developer after the launch of commercial operation of the project. Payment will be made on a six-month basis.
BOT Toll Model	• In this toll based BOT model, a road developer constructs the road and is allowed to recover his investment through toll collection over a period of nearly 30 years in most cases. • There is no government payment to the developer as he earns his money invested from tolls.
Engineering, Procurement and Construction (EPC) Model	• The cost is completely borne by the government. • Government invites bids for engineering knowledge from private players. • Procurement of raw materials and construction costs are met by the government. • The private sector's participation is minimal and is limited to the provision of engineering expertise. • This model causes a high financial burden for the government.

PROBLEMS WITH PPP PROJECTS

- Inclusion disputes in contracts, lack of capital, regulatory hurdles, poor regulation by the Indian government, below-average performance worldwide, NPAs in public sector banks, backdoor entry for private **players, crony capitalism, frequent renegotiations leading to higher costs, and opportunistic behavior.**

VIJAY KELKAR COMMITTEE REPORT ON REVISITING AND REVITALISING PPP MODEL

- Prudent utilization of viability gap funds.
- Improved fiscal reporting practices and careful monitoring of performance.
- Enhancing the maturity and sophistication of the PPP model based on India's experience.
- Establishing an Infrastructure PPP Adjudication Tribunal (IPAT) for dispute resolution.
- Scraping projects with insufficient progress and re-bidding after issue resolution.
- Developing sector-specific institutional frameworks for PPP infrastructure projects.
- Creating umbrella guidelines for stressed projects and sector-specific frameworks.
- Discouraging the use of "Swiss Challenge" to promote transparency.
- Amending the Prevention of Corruption Act to differentiate between errors and corruption.

FOREIGN DIRECT INVESTMENT (FDI) AND FOREIGN INSTITUTIONAL INVESTMENT (FII) IN INVESTMENT MODEL

- FDI contributes to economic growth, employment, and technology advancement by foreign entities investing directly in businesses or projects.
- In India, FDI inflows reached USD 83.57 billion in the Financial Year 2021-22., with major sectors being services, software, telecommunications, and construction.
- FII investments focus on the Indian stock and debt markets, providing liquidity and stability. FIIs held around $576 billion worth of Indian stocks as of May 2021, influencing market performance and boosting investor confidence.

Conclusion

The government has implemented various measures to attract FDI and FII, including liberalizing investment norms, simplifying procedures, and promoting ease of doing business. Initiatives such as the **"Make in India"** campaign and the introduction of the **National Infrastructure Pipeline** have further encouraged foreign investments.

NATIONAL INVESTMENT AND INFRASTRUCTURE FUND (NIIF)

- **Establishment:** NIIF, founded in 2015, operates as a Category-II Alternative Investment Fund, financing commercially viable greenfield, brownfield, and stalled infrastructure projects.
- **Collaborative Platform:** It serves as a collaborative investment platform for both international and Indian investors.
- **Management of Funds:**
  - **Master Fund:** Invests in operational assets across core infrastructure sectors like roads, ports, airports, and power.
  - **Fund of Funds:** Invests in funds managed by experienced fund managers in infrastructure-related sectors such as green infrastructure, mid-income housing, and infrastructure services.
  - **Strategic Opportunities Fund:** Primarily invests in equity and equity-linked instruments.

INDIA INFRASTRUCTURE PROJECT DEVELOPMENT FUND (IIPDF)

- The **IIPDF scheme** was set up in **2007**. It is a central sector scheme with total outlay of **Rs. 150 crores** for a period of three years from **2022-23 to 2024-25.**
- The scheme is aimed to provide financial support for quality project development activities.

CONTRIBUTION TO INFRASTRUCTURE FINANCING

- **Meet project development costs:** The scheme is available to the Sponsoring Authorities for PPP projects for meeting the project development costs.
- **Cover transaction costs:** The Sponsoring Authority can avail up to 75% of the project development expenses as an interest free loan to cover a portion of the PPP transaction costs, thereby reducing the impact of costs related to procurement on their budgets.
- **Improve quality of infrastructure:** The scheme will improve the quality and pace of infrastructure development in the country by encouraging private sector participation.

WAY FORWARD

- **Transaction advisers:** A key step in structuring quality PPP projects is to provide quality advisory/ consultancy services to the Project Sponsoring Authorities (PSAs), which is a time consuming and difficult process. Therefore, the services of pre-qualified Transaction Advisers should be provided.

NATIONAL INFRASTRUCTURE PIPELINE (NIP)

- **Overview:** NIP outlines a roadmap for investing Rs. 111 lakh crores in infrastructure over a five-year period (2020-2025), with the center, state, and private sector sharing the investment in a **39:39:22 ratio**.
- **Allocation of Investment:** Approximately 70% of the total investment is earmarked for Energy (24%), Roads (19%), Urban (16%), and Railways (13%).

AIMS AND OBJECTIVES OF NIP

- **Economic Objectives:**
    - Achieve a GDP of $5 Trillion by 2024-25.
    - Ensure 24x7 power availability with a focus on affordable and clean energy.
- **Social Objectives:**
    - Provide 100% population coverage for telecom and high-quality broadband services.
    - Establish world-class education and research institutes for quality education.
- **Environmental Objectives:**
    - Develop convenient and efficient transportation and logistics systems to enhance connectivity.
    - Achieve zero slums with piped water supply and 24x7 water availability.

WAY FORWARD

- **Atanu Chakraborty Task Force:** Led by Economic Affairs Secretary Atanu Chakraborty, the task force projects capital expenditure of Rs.102 trillion by 2025, with the center, states, and private sector sharing in a 39:39:22 ratio.

NATIONAL MONETISATION PIPELINE

- **Under the Union Budget 2021-22, monetization of assets was recognised** as one of the pillars for improved and sustainable infrastructure financing in the country.
- The **National Monetization Pipeline (NMP)** is a government initiative in India aimed at unlocking the value of public sector assets by monetizing them.

Key Words: Hybrid Annuity Model (HAM), BOT Annuity Model, BOT Toll Model, Engineering, Procurement and Construction (EPC) Model, SDG Goal 9, Viability Gap Funding (VGF), India Infrastructure Finance Company Ltd, Infrastructure Investment Trust Fund (INVITS), National Investment And Infrastructure Fund (NIIF), India Infrastructure Project Development Fund (IIPDF), National Infrastructure Pipeline (NIP)

Previous Year Questions		
1.	Explain the meaning of investment in an economy in terms of capital formation. Discuss the factors to be considered while designing a concession agreement between a public entity and a private entity.	2020
2.	"Investment in infrastructure is essential for more rapid and inclusive economic growth." Discuss in the light of India's experience.	2021

16 EMPLOYMENT, UNEMPLOYMENT AND SKILL DEVELOPMENT

DEFINITION: AS PER INTERNATIONAL LABOUR ORGANISATION (ILO)

- **Employment:** People **aged 15 or older** who have worked for at least one hour during a week or have a job with permissible absences (e.g., holidays, sick leave).
- **Unemployment:** Individuals **aged 15 and older** without a job who are actively seeking employment.
- **Unemployment rate:** The percentage of unemployed individuals divided by the total labor force.
- **Labor Force Participation Rate:** The proportion of the working-age population that is either employed or actively seeking employment.

Data: Trends of Unemployment
• **India's Unemployment Rate:** As of **March 2023**, unemployment rate has risen to a **3 month high of 7.8% (Center of Monitoring Indian Economy).** In absolute terms around 1 million people are unemployed in India. • **India's Labour Force Participation Rate:** It is updated yearly, available from Dec 1990 to Dec 2022, with an **average rate of 54.2 %** • **Female Labour Force Participation Rate (FLFPR):** India's **FLFPR** i.e. **32.8%** (in **2021-22**) has also been declining and is well below the global **average of 48%.**

CAUSES OF UNEMPLOYMENT

Economic Causes

- **Decline in manufacturing jobs:** Automation and multi-skilling has reduced the need for human resources. There has been a decline of around 1 million manufacturing jobs in five years from 2012 to 2018 in India.
- **Labour underutilisation:** Mismatch between labour supply and demand extends far beyond the 188 million unemployed.
- **Rise in voluntary unemployment:** Voluntary unemployment refers to a situation where people choose not to work below a certain income level after 'investing' in education.

Structural Causes

- **Over-reliance on agriculture:** A significant portion of the population depends on agriculture, which provides seasonal employment for only a few months.
- **Infrastructural bottlenecks:** Insufficient infrastructure growth and low investments in the manufacturing sector limit employment opportunities in the secondary sector, leading to heavy reliance on the service sector.
- **Outdated curriculum:** Outdated educational curriculum in schools and colleges fails to align with current industry demands, resulting in structural unemployment which leads to a large workforce in the informal sector.

Social Causes

- **Rapid Population Growth:** the rate of job creation has not been able to keep pace with the expanding workforce.
- **Gender Inequality:** women face limited job opportunities due to cultural norms, lack of access to education and training.
- **Issue of getting decent work:** challenge in obtaining fair wages, job security, and favorable working conditions.

Legal and Administrative Causes

- **Shrinking public sector:** Government jobs have declined.
- **Inadequate labor market policies:** Policies related to labor regulations, industrialization may not be effectively implemented or aligned with the changing needs of the economy.
- **Inefficient employment exchanges:** Connecting job seekers with employers has been ineffective.
- **Lack of entrepreneurship and start-up support:** The ecosystem for entrepreneurship and start-ups is not robust.

GOVERNMENT'S INITIATIVE IN PROMOTING EMPLOYMENT GENERATION IN INDIA

- **Interlinking of databases:** In Union budget 2021-2022, it has been announced that portals such as Udyam, e-Shram, National Career Service (NCS) and Atma Nirbhar Skilled Employee-Employer Mapping (ASEEM) will be interlinked to act as live, organic databases, providing G2C, B2C and B2B services.

- **Prime Minister's Street Vendor's Atma Nirbhar Nidhi (PM SVANidhi):** The central government provided an initial working capital of up to Rs 10,000 to street vendors.
- **Prime Minister's Employment Generation Programme (PMEGP):** Credit-linked subsidy programme for generating self-employment through micro-enterprises in the non-farm sector.
- **Pradhan Mantri MUDRA Yojana (PMMY):** To provide loans up to 10 lakh to the non-corporate, non-farm small/micro enterprises.
- **Stand-Up India:** Facilitates bank loans between 10 lakh and 1 Crore for SC/ST and/or women entrepreneurs.
- **Startup India:** Flagship initiative to promote startup culture and build an inclusive ecosystem for innovation and entrepreneurship.

CHALLENGES IN CREATING EMPLOYMENT OPPORTUNITIES

- Rapid population growth, skill gap, dominance of the informal sector, gender disparity, technological advancement, statistical challenges, volatile global market, low capital availability with high-interest rates are some of the challenges in creating employment opportunities.

CONCLUSION

The government must acknowledge that the situation on the jobs front is serious. India is now in a position where its rising numbers of young people and declining fertility have the potential to reap a **"demographic dividend".** The lack of reasonably paying jobs risks turning that into a spectre.

SKILL DEVELOPMENT

According to **UNEVOC (a combination of 'UNESCO' and 'vocational education'),** the acquisition of practical competencies, know-how and attitudes necessary to perform a trade or occupation in the labour market is known as skill development.

India Skills Report 2023 Key Findings: Periodic Labour Force Survey (PLFS 2020-21): Only 5.4% of the total workforce have formal skill/vocational training in India.

NEED FOR SKILL DEVELOPMENT

- **Adaptation to changing workforce:** Developing skills enables individuals to navigate uncertainties and remain employable as industries and technologies advance.
- **Professional growth and advancement:** Skill development allows individuals to take on new challenges, perform better in their roles, and increase their chances of promotion.
- **Entrepreneurial opportunities:** Skill development opens doors for individuals to explore and pursue entrepreneurial ventures.
- **Demographic dividend:** Skill development is crucial to effectively utilize India's expected largest workforce in the world by 2025.
- **Unemployment rates:** Skill development is essential in addressing high unemployment rates and ensuring individuals have the necessary skills for available jobs.

POLICY INITIATIVES BY GOVERNMENT

- **Skills Acquisition and Knowledge Awareness for Livelihood (SANKALP):** Aims for convergence among skill training activities, improving quality of skill development programs, and creating industry-led and demand-driven skill training capacity.
- **Skills Strengthening for Industrial Value Enhancement (STRIVE):** Aims to create awareness through industry clusters and enhance the delivery quality of ITIs (Industrial Training Institutes).
- **Pradhan Mantri Kaushal Vikas Yojana 3.0:** Empowers India's youth with employable skills through over 300 available courses.
- **Pradhan Mantri Kaushal Kendra:** Aspirational Model Training Centres opened in every district, with around 3,200 small training centers and over 1.4 crore youth trained from 2015 to 2021.
- **Capacity Building Scheme:** Provides residential training to the youth of the North-Eastern Region (NER) with a budget of Rs. 25 Cr.
- **Udaan:** A Special Industry Initiative (SII) focused on making the educated youth of Jammu and Kashmir employable.
- **India International Skill Centres (IISCs):** Developed to bridge the global shortage of labor force and provide assessment and certification on international standards.
- **Skilled Workers Arrival Database for Employment Support:** Conducts skill mapping of returning citizens under **Vande Bharat Mission.**

- **World Economic Forum's Reskilling Revolution:** Aims to provide better education, skills, and jobs to one billion people by 2030, with India as a founding member.
- **ASEEM Portal:** Helps skilled individuals find sustainable livelihood opportunities.
- **National Education Policy (NEP) 2020 provisions for Skill Development:** Integrates vocational education programs into mainstream education and targets at least 50% learners to have exposure to Vocational Education by 2025.
- **Yuva Portal:** Connects and assists in locating prospective young start-ups, facilitating communication and presenting the work of CSIR labs for the benefit of others.

CONCLUSION

Skill development is a continuous process that requires dedication, motivation, and a proactive approach to remain competitive and achieve personal and professional success. It promotes a mindset of lifelong learning. In today's fast-paced world, knowledge and skills become outdated quickly.

JOBLESS GROWTH IN INDIA

- Jobless growth means the economy experiences growth, i.e., increasing GDP but at the same time either employment generation is constant with growth or its in decreasing order.
- The **NSSO's estimates** for the year **2017-18** show that India's joblessness was **6.1 per cent** of the **labour force**, which is amongst the highest since 1972-73. But it dropped to **4.1%** in the year **2021-22**.

REASONS FOR JOBLESS GROWTH IN INDIA

- **Technological Advancements:** Rapid technological advancements and automation have increased productivity but reduced the demand for labour.
- **Slow Industrial Expansion:** Labor-intensive industries like agriculture and manufacturing have not seen substantial growth due to constraints like inadequate infrastructure, limited access to credit, and outdated policies.
- **Informal Sector Dominance:** The informal sector, comprising unorganized and small-scale enterprises, employs a substantial portion of the workforce but lacks stability, social security benefits, and growth prospects.
- **Missing Middle:** The services sector has experienced high growth, but the manufacturing sector, which is crucial for employment generation, has remained stagnant, creating a gap in job creation.

GIG WORKERS

- **Gig Economy:** It is a free and global market where companies and contractors (independent workers) set short-term and on demand professional relationships that are both flexible and skill based.
- **Gig Worker:** These are workers who are engaged "on demand" by the companies on short- term contacts or freelance work instead of full-time basis. Example – Zomato delivery, Uber Drivers

Data and Facts
• **Rise of Gig workers in the Economy:** There has been a rising share of gig workers in the economy at the rate of 13% in the overall hiring intent by employment type. • According to NITI Aayog at present there are more than 7.5 million gig workers in India, and they are expected to swell to 25 million by 2030. • According to an estimate around 60% of the new employment is created by the gig world. • India's Gig Economy is expected to grow at a CAGR of 17% to $455 billion by 2023 (ASSOCHAM).

WHY GIG WORKER PREFERRED IN THE ECONOMY

- **Job Flexibility:** Gig Economy offers flexible work hours and no attendance restrictions.
- **Jobs for Low-skilled Workers:** Gig Economy provides opportunities for low-skilled workers due to project-based or less time-consuming jobs.
- **Chance to Gain Experience:** Students can gain skills and experience before entering full-time employment.
- **No Age Barrier:** The Gig Economy offers employment opportunities for both young and retired individuals.
- **Beneficial for Women:** Women can take career breaks and still earn independently through the Gig Economy.

CHALLENGES ASSOCIATED WITH GIG ECONOMY

Labour bargaining power weakened, wages below minimum wage, hampers inclusive growth, limited access to finance/technology/market, low labour productivity, vulnerable workforce with no safety or benefits, worsens poverty, affects marginalised groups, lack of credible data for targeted government schemes.

LABOUR LAW REFORMS

- One of the important determinants of economic development of any country is the human capital and the Labour force is one of the essential components of Human Capital.
- Labour as a subject is in the Concurrent List and, therefore, both the Central and the State governments are competent to enact legislations subject to certain matters being reserved for the Centre

LATEST REFORM

- The **Second National Commission of Labour** had submitted its report in 2002 which said that there was multiplicity of Labour Laws in India.
- In 2019, the Ministry of Labour and Employment introduced four Bills on labour codes to consolidate 29 central laws. These Codes regulate: (i) Wages, (ii) Industrial Relations, (iii) Social Security, and (iv) Occupational Safety, Health and Working Conditions.

KEY FEATURES OF THE REFORM

- **Code on Wages, 2019:** This code consolidates and simplifies existing labour laws related to wages and payment of wages. It aims to ensure the minimum wages and timely payment of wages to all employees.
- **Occupational Safety, Health, and Working Conditions (OSHWC) Code, 2020:** This code amalgamates various labour laws concerning occupational safety, health, and working conditions. It covers matters such as working hours, rest intervals, leave entitlements, workplace safety, and welfare measures.
- **Fixed Term Employment:** allowing employers to hire workers for a specific project or period without the obligation of providing regular employment benefits.
- **Industrial Relations Code:** aims to consolidate and streamline the laws related to industrial relations, including aspects such as trade unions, dispute resolution mechanisms, and the recognition of unions.

WAY FORWARD

Giving importance to the workers when the Prime Minister had started **"Shramev Jayate"** on 16th October 2014 at that moment, while terming the workers as **"Nation Builders",** he had said that the power of **"Shramev Jayate"** for growth of the country was equal to that of **"Satyamev Jayate"**

Key Words: Unemployment rate, Labor Force Participation Rate, (FLFPR), National Education Policy (NEP) 2020, Yuva Portal, Missing middle, Gig worker, Gig economy, Moonlighting, Second National Commission of Labour, Code on Wages, 2019, (OSHWC) Code, Industrial Relations Code, Shramev Jayate, Nation Builders.

Previous Year Questions		
1.	While we found India's demographic dividend, we ignore the dropping rates of employability. What are we missing while doing so? Where will the jobs that India desperately needs come from? Explain.	2014
2.	Account for the failure of the manufacturing sector in achieving the goal of labour-intensive exports rather than capital-intensive exports. Suggest measures for more labour-intensive rather than capital-intensive exports.	2017
3.	"Success of 'Make in India' programme depends on the success of 'Skill India' programme and radical labour reforms." Discuss with logical arguments.	2015

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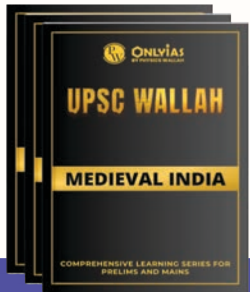

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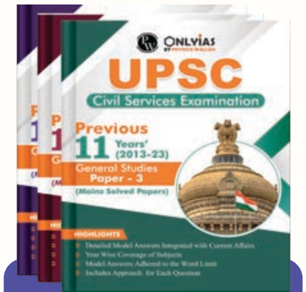

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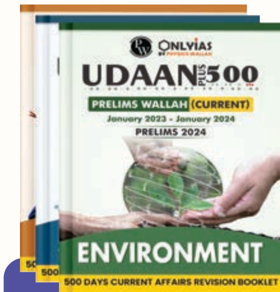

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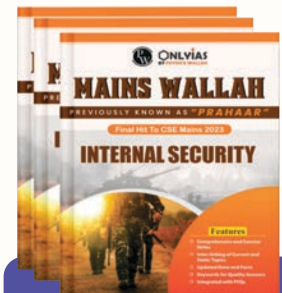

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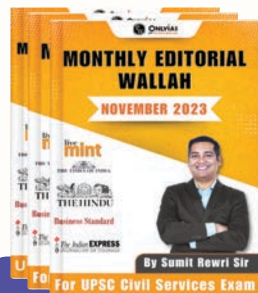

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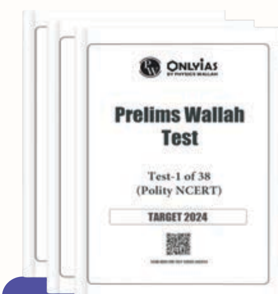

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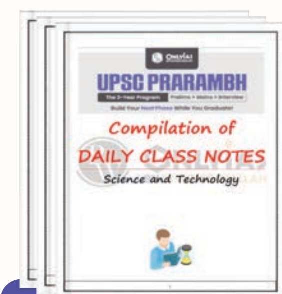

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